INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
*We Protect Hoosiers and Our Environment.*
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

**Eric J. Holcomb**
*Governor*

**Bruno Pigott**
*Commissioner*

VIA ELECTRONIC MAIL July 21, 2017

Mr. Thomas Barnett
ArcelorMittal Indiana Harbor, LLC
3001 Dickey Rd
East Chicago, Indiana 46312

Dear Mr. Barnett:

Re: Final NPDES Permit No. IN0000205
ArcelorMittal Indiana Harbor, LLC –
Indiana Harbor West
East Chicago, Lake County, Indiana

Your application for a National Pollutant Discharge Elimination System (NPDES) permit for authorization to discharge into the waters of the State of Indiana has been processed in accordance with Section 402 and 405 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq.), and IC 13-15, IDEM's permitting authority. All discharges from this facility shall be consistent with the terms and conditions of this permit.

One condition of your permit requires periodic reporting of several effluent parameters. You are required to submit both federal discharge monitoring reports (DMRs) and state Monthly Monitoring Reports (MMRs) on a routine basis. The MMR form can be found on IDEM's web site at http://www.in.gov/idem/cleanwater/2396.htm.

Once you are on this page, select the "IDEM Forms" page and locate the "Monthly Monitoring Report (MMR) for Industrial Discharge Permits-30530" under the Wastewater Facilities heading. We recommend selecting the "XLS" version because it will complete all of the calculations when you enter the data.

IDEM no longer accepts paper DMR or MMR. All NPDES permit holders are required to submit their monitoring data to IDEM using NetDMR. Please contact Rose McDaniel at (317) 233-2653 or Helen Demmings at (317) 232-8815 for more information on NetDMR. Information is also available on our website at http://IN.gov/idem/cleanwater/2422.htm.

Another condition, which needs to be clearly understood, concerns violation of the effluent limitations in the permit. Exceeding the limitations constitutes a violation of

the permit and may subject the permittee to criminal or civil penalties. (See Part II A.2.) It is therefore urged that your office and treatment operator understand this part of the permit.

A response to the comments contained in the letter dated May 26, 2017, from Kevin Doyle of ArcelorMittal, pertaining to the draft NPDES permit is contained in the Post Public Notice Addendum. The Post Public Notice Addendum is located at the end of the Fact Sheet.

It should also be noted that any appeal must be filed under procedures outlined in IC 13-15-6, IC 4-21.5, and the enclosed Public Notice. The appeal must be initiated by filing a petition for administrative review with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the emailing of an electronic copy of this letter or within eighteen (18) days of the mailing of this letter by filing at the following addresses:

Director
Office of Environmental Adjudication
Indiana Government Center North
Room N103
100 North Senate Avenue
Indianapolis, Indiana 46204

Commissioner
Indiana Department of Environmental Management
Indiana Government Center North
Room 1301
100 North Senate Avenue
Indianapolis, Indiana 46204

If you have any questions concerning the permit, please contact Richard Hamblin at 317/232-8696 or rhamblin@idem.in.gov. Questions concerning appeal procedures should be directed to the Office of Environmental Adjudication, at 317/233-0850.

Sincerely,

Paul Higginbotham
Deputy Assistant Commissioner
Office of Water Quality

Enclosures
cc: U.S. EPA, Region V
Lake County Health Department
Nick Ream, IDEM NWRO

STATE OF INDIANA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Act"), and IDEM's authority under IC13-15,

ARCELORMITTAL INDIANA HARBOR LLC – INDIANA HARBOR WEST

is authorized to discharge from a steel mill that is located at 3001 Dickey Road, East Chicago, Indiana to receiving waters named Indiana Harbor Ship Canal and Lake Michigan in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, IV, and V hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: September 1, 2017

Expiration Date: August 31, 2022

In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Issued July 21, 2017, for the Indiana Department of Environmental Management.

Paul Higginbotham
Deputy Assistant Commissioner
Office of Water Quality

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## PART I

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 002. The discharge is limited to storm water, ground water, miscellaneous non-process wastewaters, and non-contact cooling wastewater from the pickling and hot-dip galvanizing lines. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS [1][2][3]

Outfall 002

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC[4][11] | 1.6 | 3.8[6] | lbs/day | 0.016[5] | 0.037[6] | mg/l | 5 X Weekly[7] | Grab |
| Mercury[4][9] | Report | Report | lbs/day | Report | Report | ng/l | 6 X Yearly[8] | Grab |
| Temperature[10] | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |

Table 2

| | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 002, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives, or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and I.E of this permit

[4] Case-Specific LOD/LOQ
The permittee may determine a case-specific LOD or LOQ using the analytical method specified below, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| Parameter | Test Method | LOD | LOQ |
|---|---|---|---|
| Chlorine | 4500-Cl-D,E or 4500-Cl-G | 0.02 mg/l | 0.06 mg/l |
| Mercury | 1631, Revision E | 0.2 ng/l | 0.5 ng/l |

[5] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[6] The daily maximum WQBEL for chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ. Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 6.1 lbs/day.

[7] Monitoring for TRC shall be performed, at a minimum, during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

[8] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

[9] The permittee shall measure and report the identified metals as total recoverable metals.

[10] See Part III of this permit for additional requirements.

[11] See Part I.G for the Pollutant Minimization Program requirements.

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 009. The discharge is limited to storm water, groundwater, miscellaneous non-process wastewaters, and non-contact cooling water from the powerhouse area as well as treated blast furnace blowdown via Internal Outfall 509. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS [1][2][3]

Outfall 009

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC[4][13] | 5.3 | 12[6] | lbs/day | 0.012[5] | 0.028[6] | mg/l | 5 X Weekly[7] | Grab |
| Ammonia, as N[14] | 425 | 1000 | lbs/day | Report | Report | mg/l | 1 X Weekly[15] | 24-Hr. Comp. |
| Phenols(4AAP)[14] | Report | 11 | lbs/day | Report | Report | mg/l | 1 X Weekly[15] | Grab |
| Zinc[8] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead[8] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury[4][8][9] | | | | | | | | |
| WQBELs | 0.00057 | 0.0014 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly[10] | Grab |
| Interim Discharge Limit[17] | ------- | -------- | | 1.9[16] | Report | ng/l | 6 X Yearly[10] | Grab |
| Temperature[12] | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing[11] | | | | | | | | |

Table 2

| | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 009, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives, or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any

notification regarding any new or changed water treatment additives or dosage rates.

[3] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and I.E of this permit

[4] Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified below, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| Parameter | Test Method | LOD | LOQ |
|---|---|---|---|
| Chlorine | 4500-Cl-D,E or 4500-Cl-G | 0.02 mg/l | 0.06 mg/l |
| Mercury | 1631, Revision E | 0.2 ng/l | 0.5 ng/l |

[5] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[6] The daily maximum WQBEL for chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ. Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 26.3 lbs/day.

[7] Monitoring for TRC shall be performed, at a minimum, during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

[8] The permittee shall measure and report the identified metals as total recoverable metals.

[9] The permittee applied for, and received, a variance from the water quality criterion used to establish the referenced mercury WQBEL under 327 IAC 5-3.5. For the term of this permit, the permittee is subject to the interim discharge limit developed in accordance with 327 IAC 5-3.5-8.

The permittee shall report both a daily maximum concentration and an annual average concentration for total mercury. The annual average value shall be calculated as the average of the measured effluent daily values from the most recent twelve-month period. Reporting of the annual average value for mercury is not required during the first year of the permit term.

Calculating and reporting of the annual average value for mercury is only required for the months when samples are taken for mercury.

[10] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

[11] The permittee shall continue the biomonitoring program for Outfall 009 using the procedures contained under Part I.F. of this permit.

[12] See Part III of this permit for additional requirements.

[13] See Part I.G for the Pollutant Minimization Program requirements.

[14] Ammonia (as N) and Phenols (4AAP) shall be reported on a net basis. For the purpose of this permit, net values are to be calculated by subtracting the measured intake values from the measured effluent values. The intake water shall be sampled for ammonia and phenols at the same frequency and sample type as the discharge waters. Samples shall be taken at a point representative of the intake prior to any contamination of the influent by recycled wastewater. The intake water shall be monitored at pumping stations 1 and 2.

[15] Sampling for Ammonia (as N) and Phenols (4AAP) shall occur at the monitoring frequencies specified in the permit on the same day at Outfalls 009, 010, 011, and 509.

[16] The interim discharge limit is the Annual Average. Compliance with the interim discharge limit will be achieved with the annual average measured over the most recent (rolling) twelve-month period is less than the interim discharge limit.

Compliance with the interim discharge limit will demonstrate compliance with mercury discharge limitations of this permit for this outfall.

[17] See Part V of the permit for the Pollutant Minimization Program Plan (PMPP) requirements.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Internal Outfall 509. The discharge is limited to the H3 and H4 Blast Furnaces. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Indiana Harbor Ship Canal via Outfall 009. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS

Outfall 509

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | - | - | - | 1 X Weekly | 24 Hour Total |
| TSS | 546 | 1,642 | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| T. Cyanide[1] | 18.4 | 36.8 | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Ammonia,as N | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly[3] | 24-Hr. Comp. |
| Phenols(4AAP) | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly[3] | Grab. |
| Zinc[2] | 2.75 | 8.27 | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead[2] | 1.84 | 5.52 | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |

[1] The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| Parameter | Test Method | LOD | LOQ |
|---|---|---|---|
| Cyanide, Total | 335.4 or 4500 CN-E | 5 ug/l | 16 ug/l |

Sample preservation procedures and maximum allowable holding times for total cyanide, or available (free) cyanide are prescribed in Table II of 40 CFR Part 136. Note the footnotes specific to cyanide. Preservation and holding time information in Table II takes precedence over information in specific methods or elsewhere.

[2] The permittee shall measure and report the identified metals as total recoverable metals.

[3] Sampling for Ammonia (as N) and Phenols (4AAP) shall occur at the monitoring frequencies specified in the permit on the same day at Outfalls 009, 010, 011, and 509.

4. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 010. The discharge is limited to storm water, groundwater, miscellaneous non-process wastewaters, and non-contact cooling water from the blast furnace area, powerhouse area, and boiler house as well as overflow from Outfall 009. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS[1][2][12]

Outfall 010

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC[3][11] | 4.7 | 11[5] | lbs/day | 0.012[4] | 0.028[5] | mg/l | 5 X Weekly[6] | Grab |
| Ammonia, as N[13] | 100 | 300 | lbs/day | Report | Report | mg/l | 1 X Weekly[14] | 24-Hr. Comp. |
| Phenols(4AAP)[13] | Report | 5 | lbs/day | Report | Report | mg/l | 1 X Weekly[14] | Grab |
| Zinc[7] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead[7] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury[3][7][9] | | | | | | | | |
| WQBELs | 0.00051 | 0.0013 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly[8] | Grab |
| Interim Discharge Limit [16] | ------ | | ---- | 1.6[15] | Report | ng/l | 6 X Yearly[8] | Grab |
| Temperature[10] | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |

Table 2

| | Quality or Concentration | | | Monitoring | Requirements |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 010, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water

treatment additives, or increased dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] Case-Specific LOD/LOQ

The permittee may determine a case-specific LOD or LOQ using the analytical method specified below, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| Parameter | Test Method | LOD | LOQ |
|---|---|---|---|
| Chlorine | 4500-Cl-D,E or 4500-Cl-G | 0.02 mg/l | 0.06 mg/l |
| Mercury | 1631, Revision E | 0.2 ng/l | 0.5 ng/l |

[4] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[5] The daily maximum WQBEL for chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ. Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 23.7 lbs/day.

[6] Monitoring for TRC shall be performed, at a minimum, during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

[7] The permittee shall measure and report the identified metals as total recoverable metals.

[8] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

[9] The permittee applied for, and received, a variance from the water quality criterion used to establish the referenced mercury WQBEL under 327 IAC 5-3.5. For the term of this permit, the permittee is subject to the interim discharge limit developed in accordance with 327 IAC 5-3.5-8.

The permittee shall report both a daily maximum concentration and an annual average concentration for total mercury. The annual average value shall be calculated as the average of the measured effluent daily values from the most recent twelve-month period. Reporting of the annual average value for mercury is not required during the first year of the permit term.

Calculating and reporting of the annual average value for mercury is only required for the months when samples are taken for mercury.

[10] See Part III of this permit for additional requirements.

[11] See Part I.G for the Pollutant Minimization Program requirements.

[12] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and I.E of this permit

[13] Ammonia (as N) and Phenols (4AAP) shall be reported on a net basis. For the purpose of this permit, net values are to be calculated by subtracting the measured intake values from the measured effluent values. The intake water shall be sampled for ammonia and phenols at the same frequency and sample type as the discharge waters. Samples shall be taken at points representative of the intake prior to any contamination of the influent by recycled wastewater. The intake water shall be monitored at pumping stations 1 and 2.

[14] Sampling for Ammonia (as N) and Phenols (4AAP) shall occur at the monitoring frequencies specified in the permit on the same day at Outfalls 009, 010, 011, and 509.

[15] The interim discharge limit is the Annual Average. Compliance with the interim discharge limit will be achieved when the annual average measured over the most recent (rolling) twelve-month period is less than the interim discharge limit.

Compliance with the interim discharge limit will demonstrate compliance with mercury discharge limitations of this permit for this outfall.

[16] See Part V of the permit for the Pollutant Minimization Program Plan (PMPP) requirements.

5. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 011. The discharge is limited to storm water, groundwater, miscellaneous non-process wastewaters, vacuum degassing (Internal Outfall 701), continuous casting (Internal Outfall 702), and on-site oil processing facility process wastewaters, boiler house wastewater, vacuum truck decant as well as non-contact cooling water serving the blast furnaces, basic oxygen furnace, vacuum degasser, and continuous caster. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Indiana Harbor Ship Canal. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS[1][2][12]

### Outfall 011

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC[3][11] | 2.4 | 5.7[5] | lbs/day | 0.013[4] | 0.031[5] | mg/l | 5 X Weekly[6] | Grab |
| Ammonia, as N[13] | 75 | 150 | lbs/day | Report | Report | mg/l | 1 X Weekly[14] | 24-Hr. Comp. |
| Phenols (4AAP)[13] | Report | 5 | lbs/day | Report | Report | mg/l | 1 X Weekly[14] | Grab |
| Zinc[7] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Monthly | 24-Hr. Comp. |
| Lead[7] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury[3][7] | 0.00024 | 0.00059 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly[8] | Grab |
| Temperature[10] | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing[9] | | | | | | | | |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 011, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives, or increased dosage rates shall not cause the discharge from any

permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

[3] Case-Specific LOD/LOQ
The permittee may determine a case-specific LOD or LOQ using the analytical method specified below, or any other test method which is approved by the Commissioner prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

The following EPA test methods and/or Standard Methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM.

| Parameter | Test Method | LOD | LOQ |
|---|---|---|---|
| Chlorine | 4500-Cl-D,E or 4500-Cl-G | 0.02 mg/l | 0.06 mg/l |
| Mercury | 1631, Revision E | 0.2 ng/l | 0.5 ng/l |

[4] The monthly average water quality based effluent limit (WQBEL) for total residual chlorine is less than the limit of quantitation (LOQ) as specified below. Compliance with the monthly average limit will be demonstrated if the monthly average effluent level is less than or equal to the monthly average WQBEL. Daily effluent values that are less than the LOQ, used to determine the monthly average effluent levels less than the LOQ, may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

[5] The daily maximum WQBEL for chlorine is greater than or equal to the LOD but less than the LOQ as specified below. Compliance with the daily maximum limit will be demonstrated if the observed effluent concentrations are less than the LOQ. Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 11.1 lbs/day.

[6] Monitoring for TRC shall be performed, at a minimum, during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

[7] The permittee shall measure and report the identified metals as total recoverable metals.

[8] Mercury monitoring shall be conducted bi-monthly in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.

[9] The permittee shall continue the biomonitoring program for Outfall 011 using the procedures contained under Part I.F. of this permit.

[10] See Part III of this permit for additional requirements.

[11] See Part I.G for the Pollutant Minimization Program requirements.

[12] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and I.E of this permit

[13] Ammonia (as N) and Phenols (4AAP) shall be reported on a net basis. For the purpose of this permit, net values are to be calculated by subtracting the measured intake values from the measured effluent values. The intake water shall be sampled for ammonia and phenols at the same frequency and sample type as the discharge waters. Samples shall be taken at points representative of the intake prior to any contamination of the influent by recycled wastewater. The intake water shall be monitored at pumping stations 1 and 2.

[14] Sampling for Ammonia (as N) and Phenols (4AAP) shall occur at the monitoring frequencies specified in the permit on the same day at Outfalls 009, 010, 011, and 509.

6. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Internal Outfall 701. The discharge is limited to treated vacuum degasser wastewater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with other waste streams contributing to Outfall 011. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS

Outfall 701

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Monthly Average | Daily Maximum | Units | Monthly Average | Daily Maximum | Units | Measurement Frequency | Sample Type |
| Flow | Report | Report | MGD | - | - | - | 2 X Weekly | 24 Hour Total |
| TSS | 21.2[1] | 59.4[1] | lbs/day | Report[1] | Report[1] | mg/l | 2 X Weekly | 24-Hr. Comp. |
| Zinc[2] | 0.382[1] | 1.15 [1] | lbs/day | Report[1] | Report[1] | ug/l | 2 X Weekly | 24-Hr. Comp. |
| Lead[2] | 0.255[1] | 0.764[1] | lbs/day | Report[1] | Report[1] | ug/l | 2 X Weekly | 24-Hr. Comp. |

[1] The above identified effluent limitations are only applicable when the discharge does not get directed to the BOF and discharges through Internal Outfall 701.

[2] The permittee shall measure and report the identified metals as total recoverable metals.

7. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Internal Outfall 702. The discharge is limited to treated vacuum degasser wastewater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with other waste streams contributing to Outfall 011. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS

Outfall 702

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Monthly Average | Daily Maximum | Units | Monthly Average | Daily Maximum | Units | Measurement Frequency | Sample Type |
| Flow | Report | Report | MGD | - | - | - | 2 X Weekly | 24 Hour Total |
| TSS | 60.3[1] | 169[1] | lbs/day | Report[1] | Report[1] | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | 24.0[1] | 72.4[1] | lbs/day | Report[1] | Report[1] | mg/l | 2 X Weekly | Grab |
| Zinc[2] | 1.08[1] | 3.26[1] | lbs/day | Report[1] | Report[1] | ug/l | 2 X Weekly | 24-Hr. Comp. |
| Lead[2] | 0.724[1] | 2.17[1] | lbs/day | Report[1] | Report[1] | ug/l | 2 X Weekly | 24-Hr. Comp. |

[1] The above identified effluent limitations are only applicable when the discharge does not get directed to the BOF and discharge through Internal Outfall 702.

[2] The permittee shall measure and report the identified metals as total recoverable metals.

8. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 012. The discharge is limited to storm water and ground water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the intake channel for the Nos. 2 and 3 water intake. Such discharge shall be limited and monitored by the permittee as specified below:

## DISCHARGE LIMITATIONS [1][2]

Outfall 012

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| Parameter | Monthly Average | Daily Maximum | Units | Monthly Average | Daily Maximum | Units | Measurement Frequency | Sample Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Zinc[3] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead[3] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| Parameter | Daily Minimum | Daily Maximum | Units | Measurement Frequency | Sample Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

[1] See Part I.B. of the permit for the Narrative Water Quality Standards.

[2] The Storm Water Monitoring and Non Numeric Effluent Limits and the Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.D. and I.E of this permit

[3] The permittee shall measure and report the identified metals as total recoverable metals.

B. NARRATIVE WATER QUALITY STANDARDS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants:

   a. that will settle to form putrescent or otherwise objectionable deposits;

   b. that are in amounts sufficient to be unsightly or deleterious;

   c. that produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;

   d. which are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;

   e. which are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.

2. outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

C. MONITORING AND REPORTING

1. Representative Sampling

   Samples and measurements taken as required herein shall be representative of the volume and nature of the discharge.

2. Discharge Monitoring Reports

   a. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0).

   b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall use an arithmetic mean. When a daily discharge value is below the

LOQ, a value of zero (0) shall be used for that value in the calculation to determine the monthly average unless otherwise specified or approved by the Commissioner.

c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.

d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.

e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.

f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous monitoring period which shall be submitted no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective. These reports shall include, but not necessarily be limited to, the Discharge Monitoring Report (DMR) and the Monthly Monitoring Report (MMR). All reports shall be submitted electronically by using the NetDMR application, upon registration, receipt of the NetDMR Subscriber Agreement, and IDEM approval of the proposed NetDMR Signatory. Access the NetDMR website (for initial registration and DMR/MMR submittal) via CDX at: https://cdx.epa.gov/. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit.

3. Definitions

a. Monthly Average

(1) Mass Basis - The "monthly average" discharge means the total mass discharge during a calendar month divided by the number of days in the month that the production or commercial facility was discharging. Where less than daily samples is required by

this permit, the monthly average discharge shall be determined by the summation of the measured daily mass discharges divided by the number of days during the calendar month when the measurements were made.

(2) Concentration Basis - The "monthly average" concentration means the arithmetic average of all daily determinations of concentration made during a calendar month. When grab samples are used, the daily determination of concentration shall be the arithmetic average (weighted by flow value) of all the samples collected during the calendar day.

b. "Daily Discharge"

(1) Mass Basis – The "daily discharge" means the total mass discharge by weight during any calendar day.

(2) Concentration Basis – The "daily discharge" means the average concentration over the calendar day or any twenty-four (24) hour period that reasonably represents the calendar day for the purposes of sampling.

c. "Daily Maximum"

(1) Mass Basis – The "daily maximum" means the maximum daily discharge mass value for any calendar day.

(2) Concentration Basis – The "daily maximum" means the maximum daily discharge value for any calendar day.

(3) Temperature Basis – The "daily maximum" means the highest temperature value measured for any calendar day.

d. A 24-hour composite sample consists of at least 3 individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by:

(1) recording the discharge flow rate at the time each individual sample is taken,

(2) adding together the discharge flow rates recorded from each individuals sampling time to formulate the "total flow" value,

(3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,

(4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.

e. Concentration -The weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).

f. The "Regional Administrator" is defined as the Region 5 Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, Illinois 60604.

g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, Indiana 46204.

h. "Limit of Detection" or "LOD" means a measurement of the concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix. The LOD is equivalent to the method detection level or MDL.

i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit quantification or quantification level.

j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.

4. Test Procedures

The analytical and sampling methods used shall conform to the current version of 40 CFR 136. Multiple editions of Standard Methods for the Examination of Water and Wastewater are currently approved for most methods, however, 40 CFR Part 136 should be checked to ascertain if a particular method is approved for a particular analyte. The approved methods may be included in the texts listed below. However, different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency.

a. Standard Methods for the Examination of Water and Wastewater 18th, 19th, or 20th Editions, 1992, 1995, or 1998, American Public Health Association, Washington, D.C. 20005.

b. A.S.T.M. Standards, Parts 23, Water; Atmosphere Analysis 1972 American Society for Testing and Materials, Philadelphia, PA 19103.

c. Methods for Chemical Analysis of Water and Wastes June 1974, Revised, March 1983, Environmental Protection Agency, Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, OH 45202.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall maintain records of all monitoring information and monitoring activities, including:

a. The date, exact place and time of sampling or measurement;

b. The person(s) who performed the sampling or measurements;

c. The date(s) and time(s) analyses were performed;

d. The person(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such measurements and analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical

methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR) and Monthly Monitoring Report (MMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or

b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

Within twelve (12) months of the effective date of this permit, the permittee shall implement the non-numeric permit conditions in this Section of the permit for the entire site as it relates to storm water associated with industrial activity regardless which outfall the storm water is discharged from.

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term "minimize" means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to minimize pollutant discharges that address the selection and design considerations in Part D.3 to meet the non-numeric

effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer's specifications. Any deviation from the manufacturer's specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as in accordance with the corrective action requirements in Part I.D.6. Regulated storm water discharges from the facility include storm water run-on that commingles with storm water discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

a. preventing storm water from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from storm water;

b. use of control measures in combination may be more effective than use of control measures in isolation for minimizing pollutants in storm water discharge;

c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;

d. minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;

e. flow can be attenuated by use of open vegetated swales and natural depressions to reduce in-stream impacts of erosive flow;

f. conservation and/or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended).

Note: Industrial materials do not need to be enclosed or covered if storm water runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, store materials in appropriate containers, identify and control all on-site sources of dust to minimize stormwater contamination from the deposition of dust on areas exposed to precipitation, and ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

Implement a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust or debris may accumulate to minimize the discharge of pollutants in stormwater. The cleaning and maintenance program must encompass, as appropriate, areas where material loading and unloading, storage, handling and processing occur.

Stabilize unpaved areas using vegetation or paving where there is vehicle traffic or where material loading and unloading, storage, handling and processing occurs, unless feasible.

For paved areas of the facility where particulate matter, dust or debris may accumulate, to minimize the discharge of pollutants in stormwater, implement control measures such as the following, where determined to be feasible (list not exclusive): sweeping or vacuuming at regular intervals; and washing down the area and collecting and/or

treating and properly disposing of the washdown water. For unstabilized areas or for stabilized areas where sweeping, vacuuming, or washing down is not possible, to minimize the discharge of particulate matter, dust, or debris or other pollutants in stormwater, implement stormwater management devices such as the following, where determined to be feasible (list not exclusive): sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, and other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

Minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, implement:

i. Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
ii. Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the storm water pollution prevention team;
iv. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available; and

v. A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. In selecting, designing, installing, and implementing appropriate control measures for erosion and sediment control, check out information from both the State and EPA websites. The following two websites are given as information sources:

http://www.in.gov/idem/stormwater/2363.htm
and
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Pollution-Prevention-Plans-for-Construction-Activities.cfm

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Employee Training

Train employees with responsibility for environmental management within each department who work in areas where industrial material or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team.

The following personnel must understand the requirements of Part I.D. and Part I.E. of this permit and their specific responsibilities with respect to those requirements: Personnel who are responsible for the

design, installation, maintenance, and/or repair of controls (including pollution prevention measures); personnel responsible for the storage and handling of chemicals and materials that could become contaminants in stormwater discharges; personnel who are responsible for conducting and documenting monitoring and inspections related to storm water; and personnel who are responsible for taking and documenting corrective actions as required in Part I.D.6.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections): an overview of what is in the SWPPP; spill response procedures, good housekeeping, maintenance requirements, and material management practices; the location of all controls on the site required by this permit, and how they are to be maintained; the proper procedures to follow with respect to the permit's pollution prevention requirements; and when and how to conduct inspections, record applicable findings, and take corrective actions.

i. Non-Storm water Discharges

Determine if any non-storm water discharges not authorized by an NPDES permit exist. Any non-storm water discharges discovered must either be eliminated or modified into this permit.

The following non-storm water discharges are authorized and should be documented when they occur in accordance with Part I.E.2.c. of the permit:

Discharges from fire-fighting activities;
Fire Hydrant flushings;
Potable water, including water line flushings;
Condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
Irrigation drainage;
Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);
Routine external building washdown that does not use detergents;
Ground water or spring water;

Foundation or footing drains where flows are not contaminated with process materials;
Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., "piped cooling tower blowdown or drains); and
Vehicle wash- waters where detergents or solvents are not utilized.

j. Dust Generation and Vehicle Tracking of Industrial Materials

Minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, prepare an Annual Report to which includes the following: the results or a summary of the past year's routine facility inspection documentation and quarterly visual assessment documentation; information copied or summarized from the corrective action documentation required (if applicable). If corrective action is not yet completed at the time of preparation of this Annual Report, describe the status of any outstanding corrective action(s); and any incidents of noncompliance observed or, if there is no noncompliance, a certification signed by a responsible corporate officer, general partner or the proprietor, executive officer or ranking elected official, stating the facility is in compliance with this permit.

6. Corrective Actions – Conditions Requiring Review

a. If any of the following conditions occur, review the SWPPP to determine if and where revisions may need to be made to eliminate the condition and prevent its reoccurrence:

i. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at the facility;
ii. Control measures are not stringent enough for the discharge to meet applicable water quality standards;
iii. A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained;
iv. Visual assessments indicate obvious signs of stormwater pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam); or

b. If construction or a change in design, operation, or maintenance at

the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharge the permittee must review and revise the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limits in this permit.

7. Corrective Action Deadlines

If additional changes are necessary, a new or modified control must be installed and made operational, or a repair completed, before the next storm event if possible, otherwise as soon as is reasonably practicable given the scope of the corrective action. The reasons for any schedule for a corrective action requiring more than 30 days to complete shall be documented. A schedule for completing the work must also be identified, which must be done as soon as practicable after the 30-day timeframe but no longer than 90 days after discovery.

Where corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the SWPPP must be modified accordingly within 30 calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting the findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

The existence of any of the conditions listed in Part I.D.6 must be documented within 24 hours of becoming aware of such condition. The following information must be included in the documentation:

a. Identification and description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through stormwater or otherwise;

b. Date the condition was identified; and

c. A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time

clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

Document the corrective actions taken that occurred as a result of the conditions listed in Part I.D.6. within 30 days from the time of discovery of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete necessary installations or repairs within the 30-day timeframe and document the schedule for installing the controls and making them operational as soon as practicable after the 30-day timeframe.

9. Inspections

a. Routine Facility Inspections

During normal facility operating hours conduct inspections of areas of the facility covered by the requirements in this permit, including the following:

i. Areas where industrial materials or activities are exposed to stormwater;
ii. Areas identified in the SWPPP and those that are potential pollutant sources;
iii. Areas where spills and leaks have occurred in the past 3 years.
iv. Discharge points; and
v. Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly), as appropriate. Increased frequency may be appropriate for some types of equipment, processes and stormwater control measures, or areas of the facility with significant activities and materials exposed to stormwater. At least one of the routine inspections must be conducted during a period when a stormwater discharge is occurring.

Inspections must be performed by qualified personnel with at least one member of the stormwater pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection examine or look out for the following:

vi. Industrial materials, residue or trash that may have or could come into contact with stormwater;
vii. Leaks or spills from industrial equipment, drums, tanks and other containers;
viii. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
ix. Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
x. Control measures needing replacement, maintenance or repair.

During an inspection occurring during a stormwater discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge outfalls must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

b. Routine Facility Inspection Documentation

The findings of facility inspections must be documented and the report maintained with the SWPPP. Findings must be summarized in the annual report. Document all findings, including but not limited to, the following information:

i. The inspection date and time;
ii. The name(s) and signature(s) of the inspector(s);
iii. Weather information;
iv. All observations relating to the implementation of control measures at the facility, including:
    (1) A description of any discharges occurring at the time of the inspection;
    (2) Any previously unidentified discharges and/or pollutants from the site;
    (3) Any evidence of, or the potential for, pollutants entering the drainage system;
    (4) Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
    (5) Any control measures needing maintenance, repairs, or replacement;
v. Any additional control measures needed to comply with the permit requirements; and
vi. Any incidents of noncompliance observed.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.6. of this permit.

If the discharge was visual assessed, as required in Part I.D.9.c., during the facility inspection, include the results of the assessment with the report required in Part I.D.9.a., as long as all components of both types of inspections are included in the report.

c. Quarterly Visual Assessment Procedures

Once each quarter for the entire permit term, collect a stormwater sample from each outfall and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the stormwater discharge. Guidance on monitoring is available at:

http://water.epa.gov/polwaste/npdes/stormwater/EPA-Multi-Sector-General-Permit-MSGP.cfm

The visual assessment must be made:

i. Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
ii. On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and
iii. For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

Visually inspect or observe the sample for the following water quality characteristics:

iv. Color;
v. Odor;
vi. Clarity (diminished);
vii. Floating solids;

viii. Settled solids;
ix. Suspended solids;
x. Foam;
xi. Oil sheen; and
xii. Other obvious indicators of stormwater pollution.

Whenever the visual assessment shows obvious signs of stormwater pollution, initiate the corrective action procedures in Part I.D.6.

d. Quarterly Visual Assessment Documentation

Results of visual assessments must be documented and the documentation maintained onsite with the SWPPP. Documentation of the visual assessment must include, but is not be limited to:

i. Sample location(s);
ii. Sample collection date and time, and visual assessment date and time for each sample;
iii. Personnel collecting the sample and performing visual assessment, and their signatures;
iv. Nature of the discharge (i.e., runoff or snowmelt);
v. Results of observations of the stormwater discharge;
vi. Probable sources of any observed stormwater contamination; and
vii. If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part I.D.6. of this permit.

e. Exceptions to Quarterly Visual Assessments

i. Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.

ii. Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, taking into

account the exception described above for climates with irregular stormwater runoff.

iii. For outfalls that discharge non-contact cooling water and/or process water where the dry weather discharge flow is substantially greater than typical storm water contributions to the overall discharge flow, quarterly visual assessments are not required.

## E. STORM WATER POLLUTION PREVENTION PLAN

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g. SPCC, RCRA) address either directly or indirectly storm water prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

### 1. Development of Plan

Within 18 months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWPPP) to ensure the SWPPP is appropriate for the permitted facility. The SWPPP does not contain effluent limitations. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

### 2. Contents

The plan shall include, at a minimum, the following items:

a. Pollution Prevention Team – The SWPPP must identify the staff members (by name or title) that comprise the facility's stormwater pollution prevention team as well as their individual responsibilities. The stormwater pollution prevention team is responsible for overseeing development of the SWPPP, any later modifications to it, and for compliance with permit Parts I.D. and I.E. of this permit. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit, the most updated copy of the SWPPP, other relevant documents or information that must be kept with the SWPPP.

b. Site Description – As a minimum, the plan shall contain the following:

i. *Activities at the Facility.* Provide a description of the nature of the industrial activities at the facility.

ii. *General location map.* Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of the facility and all receiving waters for the stormwater discharges.

iii. *Site map.* Provide a map showing:

(A) Boundaries of the property and the size of the property in acres;

(B) Location and extent of significant structures and impervious surfaces;

(C) Directions of stormwater flow (use arrows);

(D) Locations of all stormwater control measures;

(E) Locations of all receiving waters, including wetlands, in the immediate vicinity of the facility. Indicate which waterbodies are listed as impaired and which are identified by the State of Indiana or EPA as Tier 2 or Tier 2.5 waters;

(F) Locations of all stormwater conveyances including ditches, pipes, and swales;

(G) Locations of potential pollutant sources identified;

(H) Locations where significant spills or leaks identified have occurred;

(I) Locations of all stormwater monitoring points;

(J) Locations of stormwater inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2), indicating if you are treating one or more outfalls as "substantially identical", and an approximate outline of the areas draining to each outfall;

(K) If applicable, municipal separate storm sewer systems and where the stormwater discharges to them;

(L) Areas of federally-listed critical habitat for endangered or threatened species, if applicable.

(M) Locations of the following activities where such activities are exposed to precipitation:

(a) fueling stations;

(b) vehicle and equipment maintenance and/or cleaning areas;

(c) loading/unloading areas;

(d) locations used for the treatment, storage, or disposal of wastes;

(e) liquid storage tanks;

(f) processing and storage areas;

(g) immediate access roads and rail lines used or traveled by carriers of raw materials,

manufactured products, waste material, or by-products used or created by the facility;

(h) transfer areas for substances in bulk; and

(i) locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants.

(N) Identify in the SWPPP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants in stormwater.

Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff areas where there is the potential for deposition of particulate matter from process air emissions or losses during material-handling activities.

c. Potential Pollutant Sources:

The SWPPP must document areas at the facility where industrial materials or activities are exposed to stormwater or from which allowable non-stormwater discharges may be released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

i. *Activities in the Area.* A list of the industrial activities exposed to stormwater (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

ii. *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from the facility. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to stormwater in the three years prior to the date the SWPPP is prepared or amended.

iii. *Spills and Leaks.* The SWPPP must document where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. The SWPPP must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance, in the three years prior to the date the SWPPP is prepared or amended.

iv. *Non-Storm water Discharges* – The SWPPP must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:

A written non-storm water assessment, including the following:

(1) The date of the evaluation;
(2) A description of the evaluation criteria used;
(3) A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and
(4) The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

v. Salt Storage - The location of any storage piles containing salt used for deicing or other commercial or industrial purposes must be documented in the SWPPP.

vi. Sampling Data - All stormwater discharge sampling data collected at the facility during the previous permit term must be summarized in the SWPPP.

vii. Description of Control Measures to Meet Technology-Based Effluent Limits - The location and type of control measures you have specifically chosen and/or designed to comply with Permit Part I.D. must be documented in the SWPPP. Regarding the control measures, the following must be documented as appropriate:

(a) How the selection and design considerations of control measures were addressed.
(b) How the control measures address the pollutant sources identified.

d. Schedules and Procedures

The following must be documented in the SWPPP:

i. Good Housekeeping – Any schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;
ii. Maintenance – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the storm water requirements.
iii. Spill Prevention and Response Procedures – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in the SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate stormwater. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review;
iv. Erosion and Sediment Control – If you use polymers and/or other chemical treatments as part of the controls, identify the polymers and/or chemicals used and the purpose; and
v. Employee Training – The elements of the employee training plan shall include all, but not be limited to, the requirements set forth in Permit Part.I.D., and also the following:

(1) The content of the training;
(2) The frequency/schedule of training for employees within each department with responsibility for environmental management;
(3) A log of the dates on which designated employees received training.

e. Pertaining to Inspections

Document in the SWPPP the procedures for performing, as appropriate, the types of inspections specified by this permit, including:

i. Routine facility inspections and;
ii. Quarterly visual assessment of stormwater discharges.

For each type of inspection performed, the SWPPP must identify:

iii. Person(s) or positions of person(s) responsible for inspection;
iv. Schedules for conducting inspections, including tentative schedule for irregular stormwater runoff discharges; and
v. Specific items to be covered by the inspection, including schedules for specific outfalls.

f. Pertaining to Monitoring

For each type of monitoring, the SWPPP must document:

i. Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
ii. Parameters for sampling and the frequency of sampling for each parameter;
iii. Schedules for monitoring at the facility, including schedule for alternate monitoring periods for climates with irregular stormwater runoff;
iv. Any numeric control values (effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
v. Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data.

g. General Requirements – The SWPPP must meet the following general requirements:

i. The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on the staff or a third party, and it shall be certified in accordance with the signature requirements, under Part II.C.6.

ii. Retain a complete copy of the current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting parts I.D. and I.E. of this permit, as well as the signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. The current SWPPP or certain information from the current SWPPP must also be made available to the public (except any confidential business information (CBI) or restricted information, but clearly identify those portions of the SWPPP that are being withheld from public access.

iii. Where the SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with the SWPPP.

## F. CHRONIC BIOMONITORING PROGRAM REQUIREMENTS

The 1977 Clean Water Act explicitly states, in Section 101(3) that it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited. In support of this policy the U.S. EPA in 1995 amended 40 CFR 136.3 (Tables IA and II) by adding testing method for measuring acute and short-term chronic toxicity of whole effluents and receiving waters. To adequately assess the character of the effluent, and the effects of the effluent on aquatic life, the permittee shall conduct Whole Effluent Toxicity Testing. Part 1 of this section describes the testing procedures, Part 2 describes the Toxicity Reduction Evaluation (TRE) which is only required if the effluent demonstrated toxicity, as described in section 1.f.

### 1. Whole Effluent Toxicity Tests

Within 90 days of the effective date of the permit, the permittee shall initiate the series of bioassay tests described below to monitor the toxicity of the discharge from Outfalls 009 and 011. The permittee shall continue the bioassay tests described below to monitor the toxicity of the discharge from Outfalls 009, and 011. If toxicity is demonstrated as defined under section f.

below, the permittee is required to conduct a toxicity reduction evaluation (TRE).

a. Bioassay Test Procedures and Data Analysis

(1) All test organisms, test procedures and quality assurance criteria used shall be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms; Fourth Edition Section 13, Cladoceran (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0; EPA 821-R-02-013, October 2002, or most recent update.

(2) Any circumstances not covered by the above methods, or that required deviation from the specified methods shall first be approved by the IDEM's Permit Branch.

(3) The determination of effluent toxicity shall be made in accordance with the Data Analysis general procedures for chronic toxicity endpoints as outlined in Section 9, and in Sections 11 and 13 of the respective Test Method (1000.0 and 1002.0) of Short-term Methods of Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms (EPA-821-R-02-013), Fourth Edition, October 2002, or most recent update.

b. Types of Bioassay Tests

(1) The permittee shall conduct 7-day Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test on samples of final effluent. All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. On days three and five fresh 24-hour composite samples of the effluent collected on alternate days shall be used to renew the test solutions.

(2) If, in any control, more than 10% of the test organisms die in 96 hours, or more than 20% of the test organisms die in 7 days, that test shall be repeated. In addition, if in the *Ceriodaphnia dubia* test control the number of newborns produced per surviving female is less than 15, or if 60% of surviving control females have less than three broods, that test shall also be repeated. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms. Results of all tests regardless of completion must be reported to IDEM.

c. Effluent Sample Collection and Chemical Analysis

(1) Samples taken for the purposes of Whole Effluent Toxicity Testing will be taken at a point that is representative of the discharge, but prior to discharge. The maximum holding time for whole effluent is 36 hours for a 24 hour composite sample. Bioassay tests must be started within 36 hours after termination of the 24 hour composite sample collection. Bioassay of effluent sampling may be coordinated with other permit sampling requirements as appropriate to avoid duplication.

(2) Chemical analysis must accompany each effluent sample taken for bioassay test, especially the sample taken for the repeat or confirmation test as outlined in section f.3. below. The analysis detailed under Part I.A. should be conducted for the effluent sample. Chemical analysis must comply with approved EPA test methods.

d. Testing Frequency and Duration

The chronic toxicity test specified in section b. above shall be conducted at least once annually for the duration of the permit. The annual (once per year) monitoring requirement shall be continued through the duration of the permit term until such time as the permittee is notified by IDEM to increase the monitoring frequency to quarterly based on IDEM's evaluation of the facility changes proposed by the permittee. IDEM's evaluation of any proposed changes to the facility may include, but not limited to, new or increased use of water treatment additives and process changes.

If toxicity is demonstrated as defined under section f., the permittee is required to conduct a toxicity reduction evaluation (TRE) as specified in Section 2.

e. Reporting

(1) Results shall be reported according to EPA 821-R-02-013, October 2002, Section 10 (Report Preparation). The completed report for each test shall be submitted to the Compliance Data Section of IDEM no later than 60 days after completion of the test.

In lieu of mailing reports, reports may be submitted to IDEM electronically as an e-mail attachment. E-mails should be sent to wwreports@idem.in.gov.

(2) For quality control, the report shall include the results of appropriate standard reference toxic pollutant tests for chronic endpoints and historical reference toxic pollutant data with mean values and appropriate ranges for the test species *Ceriodaphnia dubia*. Biomonitoring reports must also include copies of Chain-of-Custody Records and Laboratory raw data sheets.

(3) Statistical procedures used to analyze and interpret toxicity data including critical values of significance to evaluate each point of toxicity should be described and included as part of the biomonitoring report.

f. Demonstration of Toxicity

(1) Acute toxicity will be demonstrated if the effluent is observed to have exceeded 1.0 $TU_a$ (acute toxic units) based on 100% effluent for the test organism in 48 hours for *Ceriodaphnia dubia*.

(2) Chronic toxicity will be demonstrated if the effluent is observed to have exceeded the levels specified below for *Ceriodaphnia dubia*.

| Outfall | Chronic Toxicity Level | Units |
|---|---|---|
| 009 | 2.3 | $TU_c$ |
| 011 | 5.6 | $TU_c$ |

(3) If toxicity is found in any of the tests as specified above, a confirmation toxicity test using the specified methodology and same test species shall be conducted within two weeks of the completion of the failed test to confirm results. During the sampling for any confirmation test the permittee shall also collect and preserve sufficient effluent samples for use in any Toxicity Identification Evaluation (TIE) and/or Toxicity Reduction Evaluation (TRE), if necessary. If any two (2) consecutive tests, including any and all confirmation tests, indicate the presence of toxicity, the permittee must begin the implementation of a Toxicity Reduction Evaluation (TRE) as described below. The whole effluent toxicity tests required above may be suspended (upon approval from IDEM) while the TRE/TIE are being conducted.

g. Definitions

(1) $TU_c$ is defined as 100/NOEC or $100/IC_{25}$, where the NOEC or $IC_{25}$ are expressed as a percent effluent in the test medium.

(2) $TU_a$ is defined as $100/LC_{50}$ where the $LC_{50}$ is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.

(3) "Inhibition concentration 25" or "$IC_{25}$" means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the $IC_{25}$ is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.

(4) "No observed effect concentration" or "NOEC" is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance

The development and implementation of a TRE (including any post-TRE biomonitoring requirements) is only required if toxicity is demonstrated as defined in Part 1, section f. above.

a. Development of TRE Plan

Within 90 days of determination of toxicity, the permittee shall submit plans for an effluent toxicity reduction evaluation (TRE) to the Compliance Data Section, Office of Water Quality of the IDEM. The TRE plan shall include appropriate measures to characterize the causative toxicants and the variability associated with these compounds. Guidance on conducting effluent toxicity reduction evaluations is available from EPA and from the EPA publications list below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characteristics Procedures, Second Edition (EPA/600/6-91/003, February 1991.
Phase II Toxicity Identification Procedures (EPA 600/R-92/080), September 1993.

Phase III Toxicity Confirmation Procedures (EPA 600/R-92/081), September 1993.

(2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I. EPA/600/6-91/005F, May 1992.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), (EPA/600/2-88/070), April 1989.

(4) Toxicity Reduction Evaluation Protocol for Municipal Wastewater Treatments Plants (EPA/833-B-99-022) August 1999.

b. Conduct the Plan

Within 30 days after the submission of the TRE plan to IDEM, the permittee must initiate an effluent TRE consistent with the TRE plan. Progress reports shall be submitted every 90 days to the Compliance Data Section, Office of Water Quality of the IDEM beginning 90 days after initiation of the TRE study.

c. Reporting

Within 90 days of the TRE study completion, the permittee shall submit to the Compliance Data Section, Office of Water Quality of the IDEM, the final study results and a schedule for reducing the toxicity to acceptable levels through control of the toxicant source or treatment of whole effluent.

d. Compliance Date

The permittee shall complete items a, b, and c from Section 2 above and reduce the toxicity to acceptable levels as soon as possible, but no later than three years after the date of determination of toxicity.

e. Post-TRE Biomonitoring Requirements (Only Required After Completion of a TRE)

After the TRE, the permittee shall conduct monthly toxicity tests with 2 or more species for a period of three months. Should three

consecutive monthly tests demonstrate no toxicity, the permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent, (see section 1.d. above for more specifics on this topic), and conduct chronic tests quarterly for the duration of the permit.

If toxicity is demonstrated, as defined in paragraph 1.f. above, after the initial three month period, testing must revert to a TRE as described in Part 2 (TRE) above.

f. In lieu of mailing reports, reports may be submitted to IDEM electronically via e-mail. E-mails should be sent to wwreports@idem.in.gov.

## G. POLLUTION MINIMIZATION PROGRAM

This permit contains a WQBEL below the LOQ for total residual chlorine. ArcelorMittal submitted the information that met the pollutant minimization program requirements as part of the last permit. If something changes at the site that would require this information to be updated, ArcelorMittal shall update the pollution minimization program requirements and submit to IDEM for review. If nothing has changed to warrant any changes to the information previously submitted as it relates to total residual chlorine, then ArcelorMittal has met this requirement.

## H. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. controls any pollutant not limited in the permit.

2. to incorporate any of the reopening clause provisions cited at 327 IAC 5-2-16.

3. to include whole effluent toxicity limitations or to include limitations for specific toxicants if the results of the biomonitoring and/or the TRE study indicate that such limitations are necessary to meet Indiana Water Quality Standards.

4. to include a case-specific Limit of Detection (LOD) and/or Limit of Quantitation (LOQ). The permittee must demonstrate that such action is warranted in accordance with the procedures specified under Appendix B, 40 CFR Part 136, using the most sensitive analytical methods approved by EPA under 40 CFR Part 136, or approved by the Commissioner.

5. to modify the 301(g) effluent limitation for ammonia-N and/or total phenols. At any time during the term of this NPDES permit, the permittee may request modification of Section 301(g) effluent limits. Such modified limits may be applied at Outfalls 009, 010, and 011, or any combination thereof.

6. to include revised Streamlined Mercury Variances (SMV) and /or Pollutant Minimization Program Plan (PMPP) requirements.

7. to specify the use of a different analytical method if a more sensitive analytical method has been specified in or approved under 40 CFR 136 or approved by the Commissioner to monitor for the presence and amount in the effluent of the pollutant for which the WQBEL is established. The permit shall specify, in accordance with 327 IAC 5-2-11.6(h)(2)(B), the LOD and LOQ that can be achieved by use of the specified analytical method.

8. to comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act, if the standards, regulations and requirements so issued or approved contains different conditions than those in the permit.

# PART II

## STANDARD CONDITIONS FOR NPDES PERMITS

## A. GENERAL CONDITIONS

1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if:

a. permission is requested in writing before such deadline;

b. IDEM grants permission to submit the application after the deadline; and

c. the application is received no later than the permit expiration date.

Under the terms of the proposed Federal E-Reporting Rule, the permittee may be required to submit its application for renewal electronically in the future.

4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date;

b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner;

c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility; and

d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

5. Permit Actions

In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or

c. A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.

Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

1. could significantly change the nature of, or increase the quantity of pollutants discharged; or
2. the commissioner may request to evaluate whether such cause exists.

In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Environmental Rules Board is liable for a civil penalty not to exceed twenty-five thousand dollars ($25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(k), a person who willfully or recklessly violates any NPDES permit condition or filing requirement, any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-8, IC 13-18-9, IC 13-18-10, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, or who knowingly makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class C misdemeanor.

Pursuant to IC 13-30-10-1.5(l), an offense under IC 13-30-10-1.5(k) is a Class D felony if the offense results in damage to the environment that renders the environment unfit for human or vertebrate animal life. An offense under IC 13-30-10-1.5(k) is a Class C felony if the offense results in the death of another person.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(10), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10-1, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record that is required to be maintained under the terms of a permit issued by the department; and may be used to determine the status of compliance, (b) renders inaccurate or inoperative a recording device or a monitoring device required to be maintained by a permit

issued by the department, or (c) falsifies testing or monitoring data required by a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater treatment plant and certified operators

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10.5(a) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(11), "responsible charge operator" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(4), the permittee shall notify IDEM when there is a change of the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator.

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(8), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a point source, regulated facility, or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;

c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and

d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless one of the following is completed prior to the commencement of the action:

a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 2-1.3-2(50). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a

significant lowering of water quality and require the submittal of an antidegradation demonstration.

b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 2-1.3-5 and 327 IAC 2-1.3-6.

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(9).

Neither 327 IAC 5-2-8(9), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(12):

a. Terms as defined in 327 IAC 5-2-8(12)(A):

(1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations in the permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.B.2.c., e, and f of this permit.

c. Bypasses, as defined in (a) above, are prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:

(1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, as defined above;

(2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required under Part II.B.2.e; or

(4) The condition under Part II.B.2.b above is met.

d. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the bypass are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

e. The permittee must provide the Commissioner with the following notice:

(1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.

(2) The permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within 24 hours of becoming aware of the bypass noncompliance. The permittee must also provide a written report within five (5) days of the time the permittee becomes aware of the bypass event. The written report must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent

recurrence of the bypass event. If a complete fax or e-mail submittal is provided within 24 hours of the time that the permittee became aware of the unanticipated bypass event, then that report will satisfy both the oral and written reporting requirement. E-mails should be sent to wwreports@idem.in.gov.

f. The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.c. The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(13):

a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.

c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:

(1) An upset occurred and the permittee has identified the specific cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee complied with any remedial measures required under Part II.A.2; and

(4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to

animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

d. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof pursuant to 40 CFR 122.41(n)(4).

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(11)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.

b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(10) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Discharge Monitoring Reports", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(11)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge that is in noncompliance are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit;

b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;

c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit;

d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants: Mercury, Lead, Zinc, and T. Cyanide.

The permittee can make the oral reports by calling (317)232-8670 during regular business hours or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. Alternatively the permittee may submit a "Bypass/Overflow Report" (State Form 48373) or a "Noncompliance 24-Hour Notification Report" (State Form 54215), whichever is appropriate, to IDEM at (317) 232-8637 or wwreports@idem.in.gov. If a complete fax or e-mail submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the fax report will satisfy both the oral and written reporting requirements.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

4. Other Compliance/Noncompliance Reporting

Pursuant to 327 IAC 5-2-8(11)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3;

The permittee shall also give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements; and

All reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

Upon its effectiveness, the proposed Federal E-Reporting Rule will require these reports to be submitted electronically.

5. Other Information

Pursuant to 327 IAC 5-2-8(11)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(15):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) The manager of one (1) or more manufacturing, production, or operating facilities provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty to make major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or

delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(1) For a Federal, State, or local government body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.

(2) Under the proposed Federal E-Reporting Rule, a method will be developed for submittal of all affected reports and documents using electronic signatures that is compliant with the Cross-Media Electronic Reporting Regulation (CROMERR). Enrollment and use of NetDMR currently provides for CROMERR-compliant report submittal.

b. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or a position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The authorization is submitted to the Commissioner.

c. Electronic Signatures. If documents described in this section are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of this section, and shall ensure that all of the relevant requirements of 40 CFR part 3 (including, in all cases, subpart D to part 3) (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission.

d. Certification. Any person signing a document identified under Part II.C.6. shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the

person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(15) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 40 CFR 122.42(a)(1), 40 CFR 122.42(a)(2), and 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any pollutant identified as toxic pursuant to Section 307(a) of the Clean Water Act which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels."

(1) One hundred micrograms per liter (100µg/l);

(2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1mg/l) for antimony;

(3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

(4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 µg/l);

(2) One milligram per liter (1 mg/l) for antimony;

(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with Sec. 122.21(g)(7).

(4) A notification level established by the Commissioner on a case-by-case basis, either at his own initiative or upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

c. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant which was not reported in the permit application under 40 CFR 122.21(g)(9).

# PART III
## Other Requirements

### A. Thermal Effluent Requirements

Temperature shall be monitored as follows at Outfalls 002, 009, 010, and 011:

DISCHARGE LIMITATIONS

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Temperature[1] | | | | | | | | |
| Intake | ---- | ---- | ---- | Report | Report | °F | 2 X Week | Grab |
| Outfall | ---- | ---- | ---- | Report | Report | °F | 2 X Week | Grab |

[1] Temperature at Outfalls 002, 009, 010, and 011 shall be sampled. On days when temperature is sampled at the outfall, temperature shall also be sampled at the intake supplying the most significant source of water to the outfall. As an alternative to direct grab measurements during this time period the facility may install a more permanent temperature measuring device that will retain the highest temperature value during any given 24 hour period.

### B. Biocides Concentration

The permittee must receive written permission from the IDEM if they desire to use any biocide or molluscicide other than chlorine. ArcelorMittal currently uses Sodium Hypochlorite (bleach/chlorine) for the control of zebra mussels. ArcelorMittal removes chlorine prior to discharge by using Sodium Bisulfate. Total Residual Chlorine (TRC) is limited at each of the affected final outfalls during periods of chlorination. The use of any biocide containing tributyl tin oxide in any closed or open cooling system is prohibited.

### C. Polychlorinated Biphenyls

There shall be no discharge of polychlorinated biphenyl (PCB) compounds attributable to facility operations such as those historically used in transformer fluids. In order to demonstrate compliance with the PCB discharge prohibition, the permittee shall provide the following PCB data with the next NPDES permit renewal application from at least one sample for all final outfalls. The corresponding facility water intakes shall be monitored at the same time as the final outfalls.

| Pollutant | Test Method | LOD | LOQ |
|---|---|---|---|
| PCBs* | EPA 608 | 0.1 ug/L | 0.3 ug/L |

* PCB, 1242, 1254, 1221, 1232, 1248, 1260, 1016

D. 301(g) Variance Request

The facility is required to submit an updated 301(g) variance request no later than with the renewal application for the next permit cycle if the facility intends to continue the variance.

Part IV
Cooling Water Intake Structures

A. Best Technology Available (BTA) Determination

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a Clean Water Act (CWA) section 316(b) regulation on August 15, 2014, that establishes standards for cooling water intake structures. 79 Fed. Reg. 48300-439 (August 15, 2014). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities and it became effective on October 14, 2014.

For permits expiring prior to July 2018, the permittee can (1) negotiate an alternative schedule for submitting required information with the Director (IDEM) after demonstrating need, or (2) request waiver(s) for submitting required information. An alternative schedule for submission of information required under the current CWA section 316(b), or waiver(s) of submittal requirements shall be reviewed and approved by IDEM. Upon approval of such alternative schedules and /or waivers, or until the time the required information/reports are submitted and the permit is renewed or modified following public notice, the IDEM is required to make a BTA determination using Best Professional Judgment (BPJ) to comply with CWA Section 316(b) based on existing information. The BTA determination is subject to change after the required information is submitted in accordance with the federal regulations effective October 14, 2014.

Based on available information, IDEM has made a Best Technology Available (BTA) determination that the existing cooling water intake structures represent best technology available to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) at this time. This determination is based on Best Professional Judgment (BPJ) and will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

B. Permit Requirements

In accordance with the recently promulgated rules at 40 CFR 122 and 40 CFR 125, the owner or operator of a facility that has CWIS with a Design Intake Flow (DIF) or Actual Intake Flow (AIF) > 125 MGD must submit the information required at 40 CFR 122.21(r)(2) through (13), including all of the associated supporting documentation and/or studies, no later than July 14, 2018, unless an alternate schedule for submission is approved or a waiver of a particular requirement is requested and granted under 40 CFR 125.95. In addition, the permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for

the purposes of a facility's compliance with the Endangered Species Act.

2. At all times properly operate and maintain the intake equipment.

3. Inform IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

4. There shall be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.

5. All required reports shall be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch.

6. Submit the information required to be considered by the Director per 40 CFR 125.98 to assist IDEM with the fact sheet or statement of basis for entrainment BTA, as soon as practicable, but no later than the next permit renewal application.

# Part V
# Streamlined Mercury Variance (SMV)

*Introduction*

The permittee submitted an application for streamlined mercury variances (SMV) on April 21, 2016 in accordance with the provisions of 327 IAC 5-3.5. A SMV establishes a streamlined process for obtaining a variance from a water quality criterion used to establish a WQBEL for mercury in a NPDES permit. Based on a review of the SMV application, IDEM has determined the application to be complete as outlined in 327 IAC 5-3.5-4(e). Interim effluent requirements for Mercury were incorporated into this permit by modification in accordance with 327 IAC 5-3.5-6 for Outfalls 009 and 010. Because this modification issued on August 25, 2016 and was during the time between the permit renewal application was submitted and this permit renewal was being processed during that period, the interim limits for Mercury and PMPP requirements are carried over into this renewal.

*Term of SMV*

The SMV and the interim discharge limits included in the Discharge Limitations Tables in Parts I.A.2 and I.A.5., will remain in effect until the NPDES permit expires under IC 13-14-8-9 (amended under SEA 620, May 2005). Pursuant to IC 13-14-8-9(d), when the NPDES permit is extended under IC 13-15-3-6 (administratively extended), the SMV will remain in effect as long as the NPDES permit requirements affected by the SMV are in effect.

*Annual Reports*

The annual report is a condition of the Pollutant Minimization Program Plan (PMPP) requirements of 327 IAC 5-3.5-9(a)(8). The annual report must describe the permittee's progress toward fulfilling each PMPP requirement, the results of all mercury monitoring within the previous year, and the steps taken to implement the planned activities outlined under the PMPP. The annual report may also include documentation of chemical and equipment replacements, staff education programs, and other initiatives regarding mercury awareness or reductions. The complete inventory and complete evaluation required by the PMPP may be submitted as part of the annual report.

The permittee will submit the annual reports to IDEM on the anniversary of the effective date of this NPDES permit renewal, as indicated on Page 1 of this permit. Annual Reports should be submitted to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, Indiana 46204 2251.

SMV Renewal

As authorized under 327 IAC 5-3.5-7(a)(1), the permittee may apply for the renewal of an SMV at any time within 180 days prior to the expiration of the NPDES permit. In

accordance with 327 IAC 5-3.5-7(c), an application for renewal of the SMV must contain the following:

- All information required for an initial SMV application under 327 IAC 5-3.5-4, including revisions to the PMPP, if applicable.
- A report on implementation of each provision of the PMPP.
- An analysis of the mercury concentrations determined through sampling at the facility's locations that have mercury monitoring requirements in the NPDES permit for the two (2) year period prior to the SMV renewal application.
- A proposed alternative mercury discharge limit, if appropriate, to be evaluated by the department according to 327 IAC 5-3.5-8(b) based on the most recent two (2) years of representative sampling information from the facility.

Renewal of the SMV is subject to a demonstration showing that PMPP implementation has achieved progress toward the goal of reducing mercury from the discharge.

Pollutant Minimization Program Plan (PMPP)

The PMPP is a requirement of the SMV application and is defined in 327 IAC 5-3.5-3(4) as the plan for development and implementation of Pollutant Minimization Program (PMP). The PMPP is defined in 327 IAC 5-3.5-3(3) as the program developed by an SMV applicant to identify and minimize the discharge of mercury into the environment. PMPP requirements (including the enforceable parts of the PMPP) are outlined in 327 IAC 5-3.5-9. In accordance with 327 IAC 5-3.5-6, the permittee's PMPP is hereby incorporated within this permit below:

| Planned Activity | Goal | Measure of Performance | Schedule for Action (from the date SMV is incorporated into NPDES Permit) |
|---|---|---|---|
| Complete Inventory/Identification | Update complete inventory/identification of chemicals, materials, equipment and storage areas containing mercury | Submittal of complete inventory/identification to IDEM | 6 months: Review of MSDS and other documentation for existing chemicals, materials, equipment and storage areas. Update of inventory for all primary Operations.<br>7 months: Update of inventory for all Finishing operations<br>8 months: Update of inventory for all Utilities operations<br>9 months: Update of inventory for all remaining operations. |
| Review Policies and Procedures for chemical, material, and equipment purchasing | Review MSDS and other documentation from vendors or manufacturers<br>Minimize the purchase of chemicals, materials and equipment containing mercury | Ensure current policies and procedures are adequate to identify and minimize purchase of chemicals, materials and equipment containing mercury | Currently implemented |
| Employee Training | Education and increased awareness | Evaluation of current employee Environmental and Health and Safety program | Complete evaluation within 6 months |
| | | If necessary, revise current training program to include relevant mercury identification, handling, recycling and disposal information | Implement revised program within 7 months |
| Facility-wide Mercury Disposal and Recycling Program | Ensure materials, chemicals and equipment containing mercury are properly stored and recycled or disposed offsite | Track and document estimated amount of mercury disposed per applicable mercury disposal and recycling regulations | Currently implemented |
| Spill Containment Procedures | Minimize possibility of accidental spills and releases | Adequate training of employees on good housekeeping practices that reduce the possibility of accidental spills and releases (see "Staff Training" Activity) | Currently implemented |
| Maintenance and Cleaning Practices | Ensure proper and safe handling of mercury-containing materials, chemicals and equipment during maintenance and cleaning activities | Ensure procedures to minimize the release of mercury from chemicals, materials and equipment containing mercury are implemented during maintenance and cleaning activities | Currently implemented |





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**ArcelorMittal Indiana Harbor LLC – Indiana Harbor West**
**Pollutant Minimization Program Plan (PMPP)**

| Planned Activity | Goal | Measure of Performance | Schedule for Action (from the date SMV is incorporated into NPDES Permit) |
|---|---|---|---|
| Characterization of Sources to Outfalls | Evaluate levels of mercury preset in intake water to plant | Data collected as part of the mercury QAPP activities required by the NPDES permit demonstrate the source of mercury in discharges is mercury present in intake water from the Indiana Harbor Ship Canal. | Complete. Data collected in 2012 and 2014 and reported in the Final Plan for Compliance Implementation Report submitted to IDEM in March 2015. |
| | Evaluate levels of mercury preset in internal Outfalls | Conduct periodic monitoring of internal Outfalls for comparison to final Outfall data | Collect and analyze samples 2/year at Outfalls 509, 702 and 701. Collect samples concurrent to (same day as) collection of samples at Outfalls 009 and 011. Data will be included in annual reports submitted at the end of each calendar year. |
| Alternatives for Mercury Reduction | Evaluation of alternatives for mercury-bearing chemicals, materials and equipment | Investigate replacement and/or reduction options for in-service chemicals, materials and equipment containing mercury | Schedule to be developed based on the results of the various source characterization activities |





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# National Pollutant Discharge Elimination System
## Fact Sheet for

**ArcelorMittal Indiana Harbor LLC – Indiana Harbor West**

**Draft: April 2017**
**Final: July 2017**

## Indiana Department of Environmental Management

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

| | |
|---|---|
| **Permittee:** | ArcelorMittal Indiana Harbor, LLC – Indiana Harbor West<br>3001 Dickey Road<br>East Chicago, Indiana 46312 |
| **Existing Permit Information:** | Permit Number: IN0000205<br>Administratively Extended Since: 11/30/16 |
| **Facility Contact:** | Thomas Barnett<br>(219)399-2380 or Thomas.Barnett@arcelormittal.com |
| **Facility Location:** | Indiana Harbor West<br>3001 Dickey Road<br>East Chicago, Indiana<br>Lake County |
| **Receiving Stream:** | Indiana Harbor Ship Canal<br>Indiana Harbor<br>Lake Michigan |
| **GLI/Non-GLI:** | GLI |
| **Proposed Permit Action:** | Renew |
| **Date Application Received:** | 6/3/16 |
| **Source Category** | NPDES Major – Industrial |
| **Permit Writer:** | Richard Hamblin<br>(317)232-8696 or rhamblin@idem.in.gov |



ED_002857_00014075-00077

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## 1.0 INTRODUCTION

The Indiana Department of Environmental Management (IDEM) received a National Pollutant Discharge Elimination System (NPDES) Permit application from the permittee on June 3, 2016. The current five year permit was issued with an effective date of December 1, 2011, in accordance with 327 IAC 5-2-6(a). The permit was subsequently modified on November 26, 2014. A modification related to a stream lined Mercury Variance was submitted to IDEM on April 19, 2016 and the draft permit modification was public noticed on June 16, 2016 with the final permit modification issued on August 25, 2016. A five year permit is proposed in accordance with 327 IAC 5-2-6(a).

The Federal Water Pollution Control Act of 1972 and subsequent amendments require a NPDES permit for the discharge of wastewater to surface waters. Furthermore, Indiana Code (IC) 13-15-1-2 requires a permit to control or limit the discharge of any contaminants into state waters or into a publicly owned treatment works. This proposed permit action by IDEM complies with both federal and state requirements.

In accordance with Title 40 of the Code of Federal Regulations (CFR) Sections 124.8 and 124.56, as well as Indiana Administrative Code (IAC) 327 Article 5, development of a Fact Sheet is required for NPDES permits. This document fulfills the requirements established in those regulations.

This Fact Sheet was prepared in order to document the factors considered in the development of NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, receiving water conditions, and wasteload allocations to meet Indiana Water Quality Standards. Decisions to award variances to Water Quality Standards or promulgated effluent guidelines are justified in the Fact Sheet where necessary.

## 2.0 FACILITY DESCRIPTION

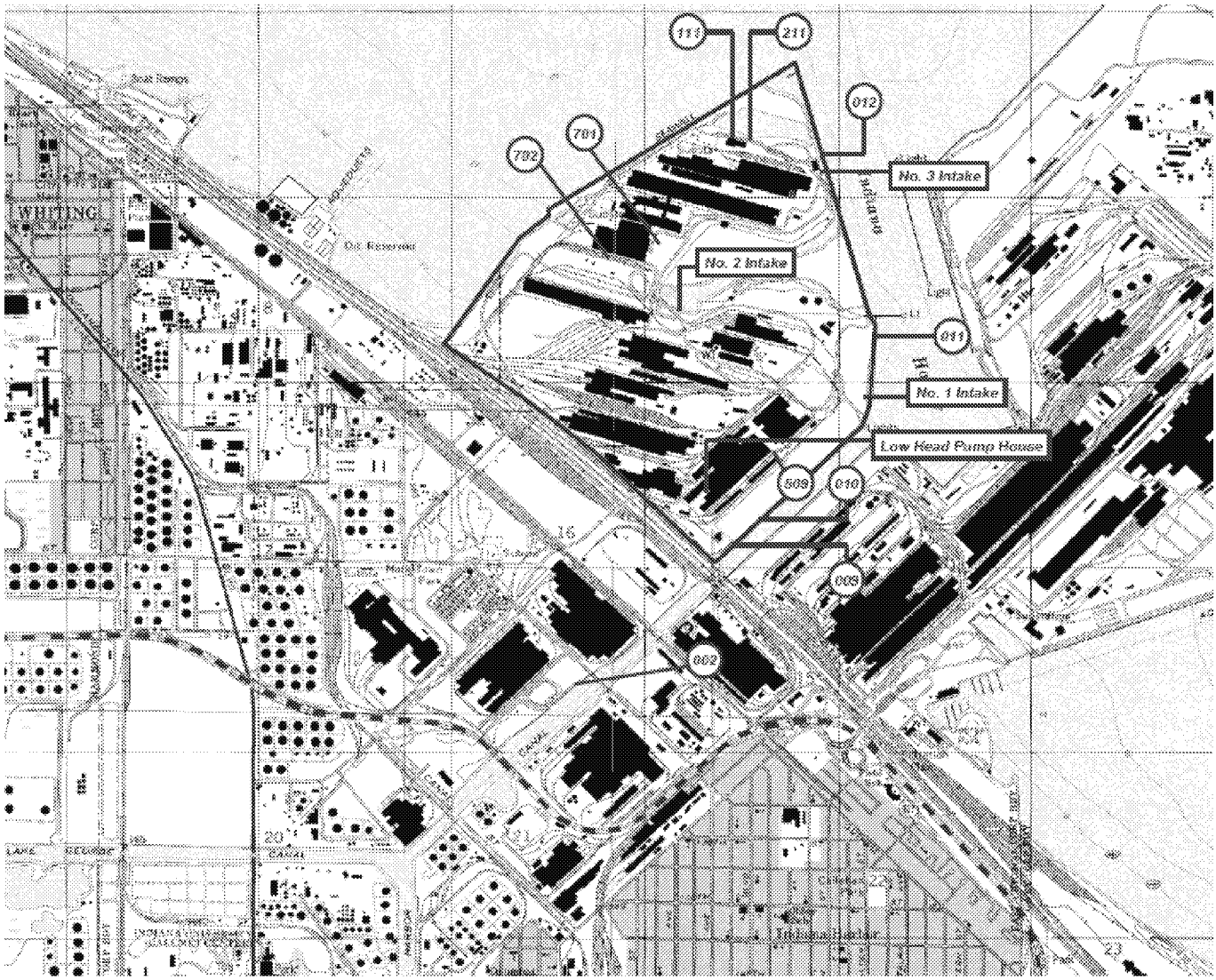
### 2.1 General

ArcelorMittal – Indiana Harbor West is classified under Standard Industrial Classification (SIC) Code 3312- Steel Mill. The permitted facility is a steel mill that produces molten iron in blast furnaces, crude steel in basic oxygen furnaces, and cast steel slabs. The cast steel slabs are processed into strip steel at other ArcelorMittal steel mills. ArcelorMittal also produces hot-dipped galvanized steel strip.

Source water is Lake Michigan and Indiana Harbor. This facility also provides the water for the ArcelorMittal Central Waste Treatment Facility (IN0063711).

A map showing the location of the facility has been included as Figure 1, below.

**Figure 1: Facility Location/Site Map.**



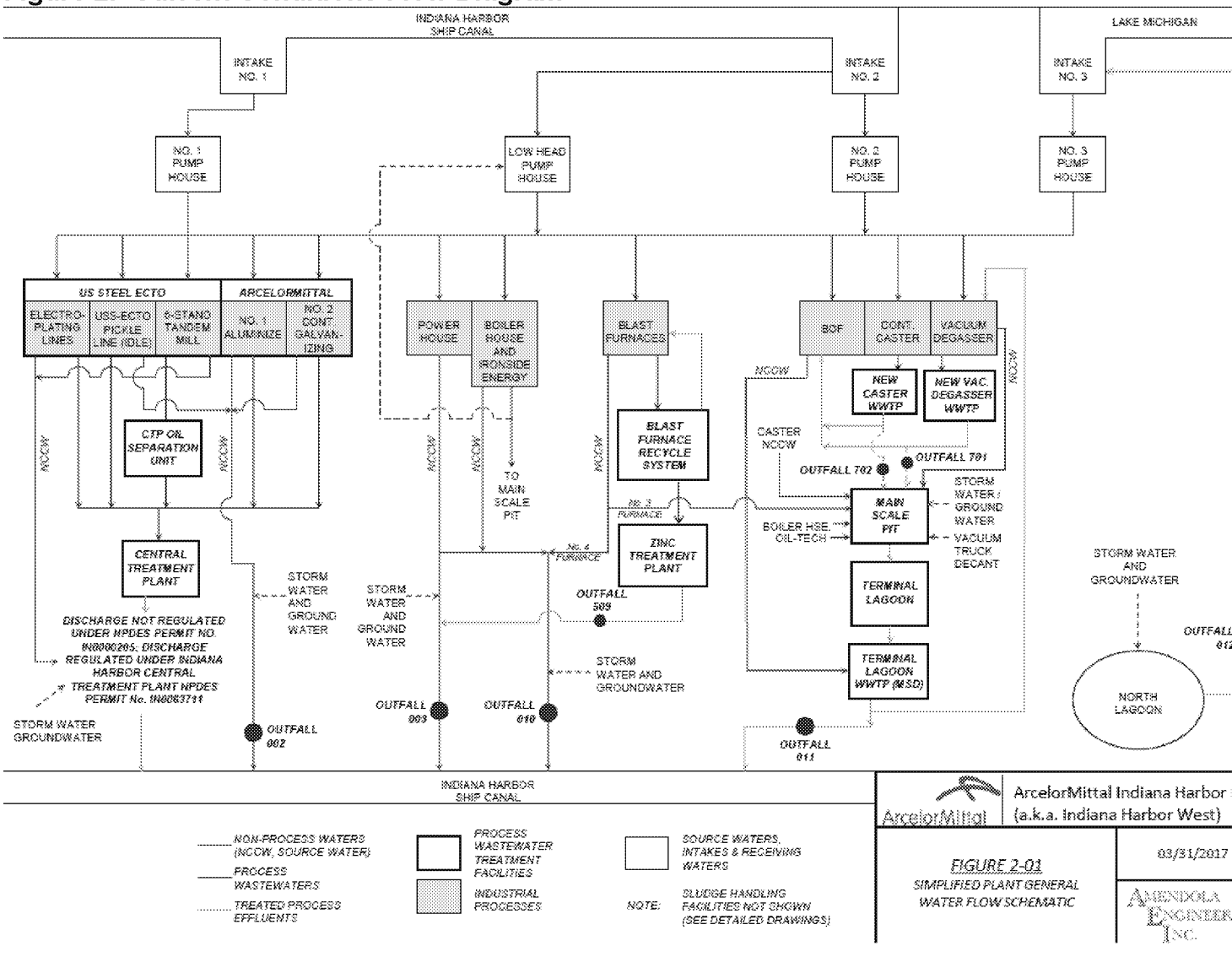

## 2.2 Outfall Locations

| | | |
|---|---|---|
| OUTFALL 002 | Latitude: | 41° 39’ 20” |
| | Longitude: | -87° 21’ 35” |
| OUTFALL 009 | Latitude: | 41° 39’ 40” |
| | Longitude: | - 87° 27’ 10” |
| OUTFALL 010 | Latitude: | 41° 39’ 40” |
| | Longitude: | - 87° 27’ 05” |
| OUTFALL 011 | Latitude: | 41° 40’ 20” |
| | Longitude: | -87° 26’ 35” |
| OUTFALL 012 | Latitude: | 41° 40’ 52” |
| | Longitude: | - 87° 26’ 45” |

## 2.3 Wastewater Treatment

A general description of sources to each outfall is provided below along with long term average flows and maximum monthly flows from January 2013 to December 2015. Water diagrams\system schematics are provided. A flow diagram of the current configuration at the facility is included as Figure 2.

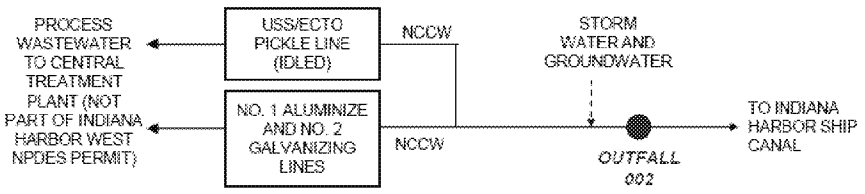
**Figure 2: Current Conditions Flow Diagram**




Outfall 002

The discharge from Outfall 002 comprises non-contact cooling water from the USS/ECTO Pickle Line (currently idled) and ArcelorMittal No. 1 Aluminize and No. 2 Galvanizing Lines, storm water and groundwater. Outfall 002 discharges to the Indiana Harbor Ship Canal. The non-contact cooling water is chlorinated for Zebra and Quagga mussel control, then dechlorinated prior to discharge. Long term average flow is 12.2 MGD. A flow diagram of Outfall 002 is included as Figure 3.

**Figure 3: Outfall 002 Flow Diagram**




ArcelorMittal Indiana Harbor LLC (a.k.a. Indiana Harbor West)

FIGURE 2-07
No. 1 AND 2 GALVANIZING LINES AND U. S. STEEL/ECTO PICKLE LINE PROCESS AND COOLING WATER SYSTEM FLOW SCHEMATIC

03/31/2017

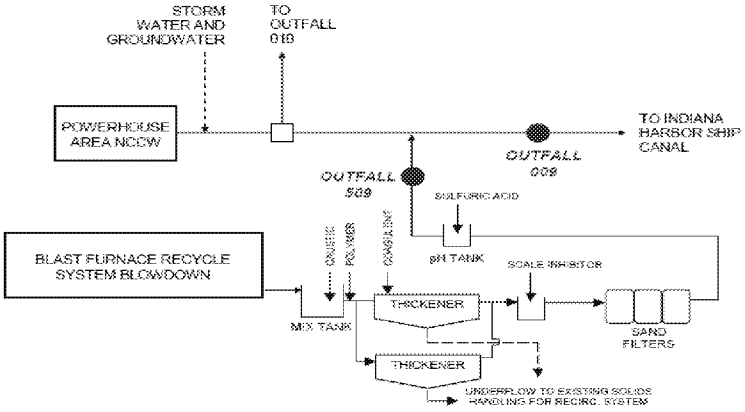
AMENDOLA ENGINEERING INC.

INTERMITTENT FLOW
SLUDGE FLOW

Outfall 009

The discharge from Outfall 009 comprises treated blowdown from the Blast Furnace Recycle System (Internal Outfall 509), non-contact cooling water from the Powerhouse area, storm water and groundwater. Outfall 009 discharges to the Indiana Harbor Ship Canal. The non-contact cooling water is chlorinated for Zebra and Quagga mussel control, then dechlorinated prior to discharge. Long term average flow is 52.5 MGD. A flow diagram of Outfall 009 is included as Figure 4.

**Figure 4: Outfall 009 Flow Diagram**




ArcelorMittal Indiana Harbor LLC (a.k.a. Indiana Harbor West)

FIGURE 2-06
BLAST FURNACE RECYCLE SYSTEM ZINC TREATMENT PLANT FLOW SCHEMATIC

03/31/2017

AMENDOLA ENGINEERING INC.

INTERMITTENT FLOW
SLUDGE FLOW

Internal Outfall 509

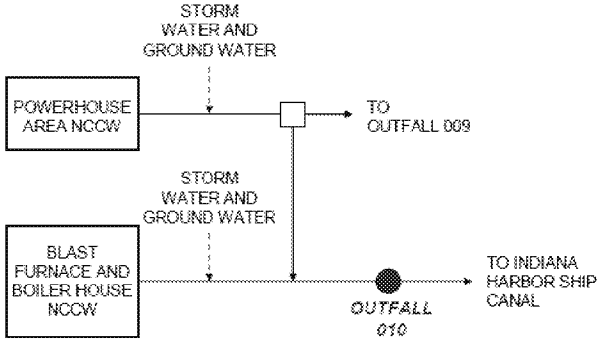
The discharge from Outfall 009 comprises treated wastewater from the Blast Furnace Recycle System Blowdown WWTP. ArcelorMittal will be terminating basic oxygen furnace steelmaking and continuous casting operations at the No. 2 Steel Producing Department at Indiana Harbor East. That production will be picked up at the No. 3 Steel Producing Department at this facility and the No. 4 Steel Producing Department at Indiana Harbor East. Consequently, ironmaking and steelmaking production for this outfall has been increased.

Outfall 509 discharges to the Indiana Harbor Ship Canal though Outfall 009. A flow diagram of Outfall 509 is included above as Figure 4.

Outfall 010

The discharge from Outfall 010 comprises non-contact cooling water from the sinter plant, No. 4 Blast Furnace, Boilerhouse and Ironside Energy, emergency overflows of non-contact cooling water from the Powerhouse area, storm water and groundwater. Outfall 010 discharges to the Indiana Harbor Ship Canal. The non-contact cooling water is chlorinated for Zebra and Quagga mussel control, then dechlorinated prior to discharge. Long term average flow is 47.4 MGD. A flow diagram of Outfall 010 is included as Figure 5.

**Figure 5: Outfall 010 Flow Diagram**



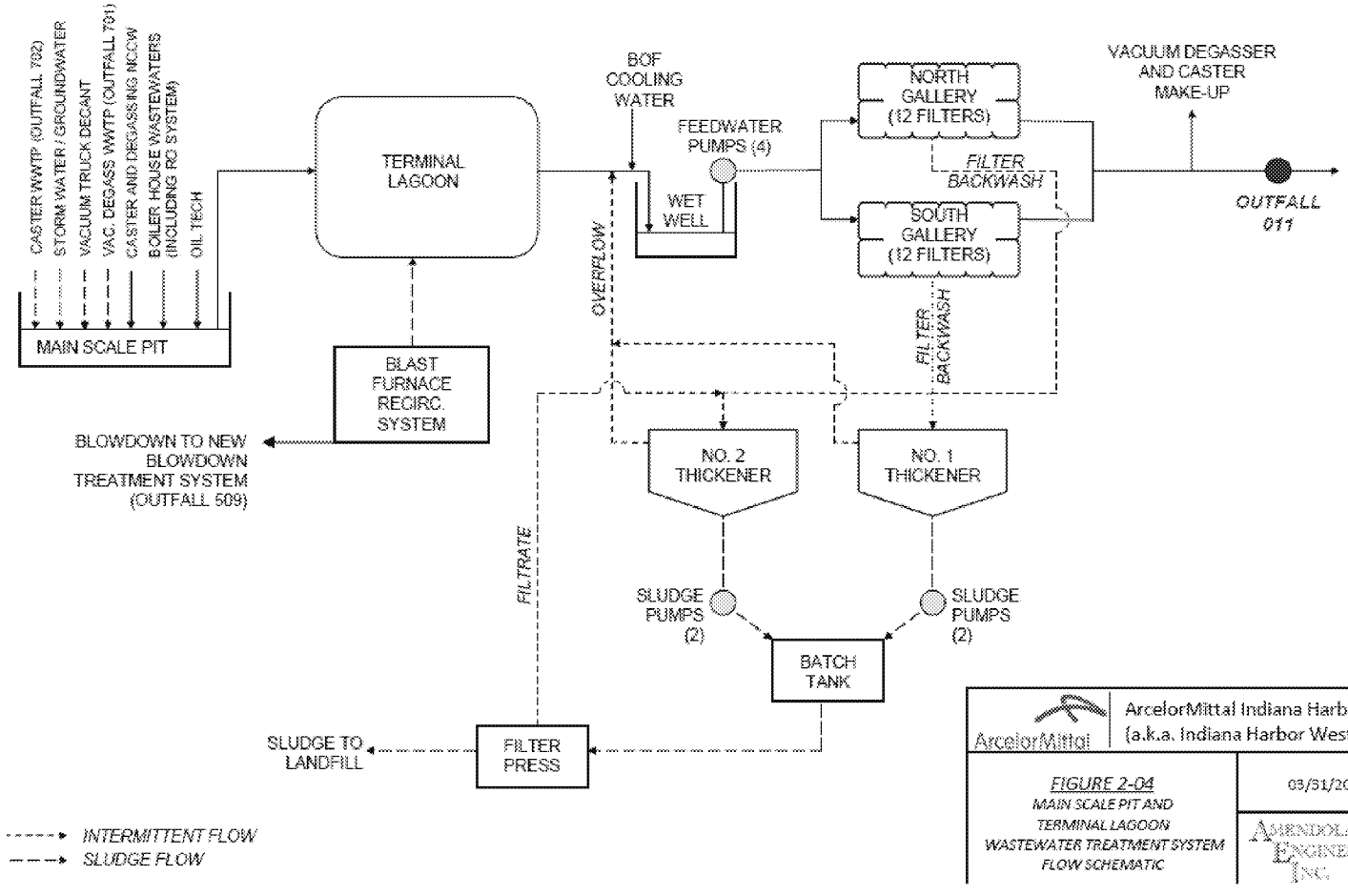
Outfall 011

The discharge from Outfall 011 comprises treated wastewater from the Main Scale Pit and Terminal Lagoon Wastewater Treatment System. The discharge comprises excess flow not used as makeup water to the Vacuum Degasser and Continuous Caster recycle system. The non-contact cooling water is chlorinated for zebra and quagga mussel control, then dechlorinated prior to discharge. Outfall 011 discharges to the Indiana Harbor Ship Canal. Process wastewaters from the following operations are discharged to the Main Scale Pit and Terminal Lagoon Wastewater Treatment System:

- Vacuum Degasser WWTP (Outfall 701; intermittent discharge)
- Continuous Caster WWTP (Outfall 702; intermittent discharge)
- No. 3 Blast Furnace, BOF, Continuous Caster and Vacuum Degasser non-contact cooling water.
- Boilerhouse Wastewater
- Oil Tech Wastewater
- Vacuum Truck Decant Water (intermittent)
- Storm water and groundwater

Long term average flow is 22.1 MGD for this outfall. A flow diagram of Outfall 011 is included as Figure 6.

**Figure 6: Outfall 011 Flow Diagram**



Internal Outfall 701

The discharge from Outfall 701 comprises treated wastewater from the Vacuum Degasser wastewater treatment system. The discharge is intermittent and comprises excess flow not evaporated in the BOF gas cleaning system. ArcelorMittal will be terminating basic oxygen furnace steelmaking and continuous casting operations at the No. 2 Steel Producing Department at Indiana Harbor East. That production will be picked up at the No. 3 Steel Producing Department at this facility and the No. 4 Steel Producing Department at Indiana Harbor East. Consequently, ironmaking and steelmaking production for this outfall has been increased.

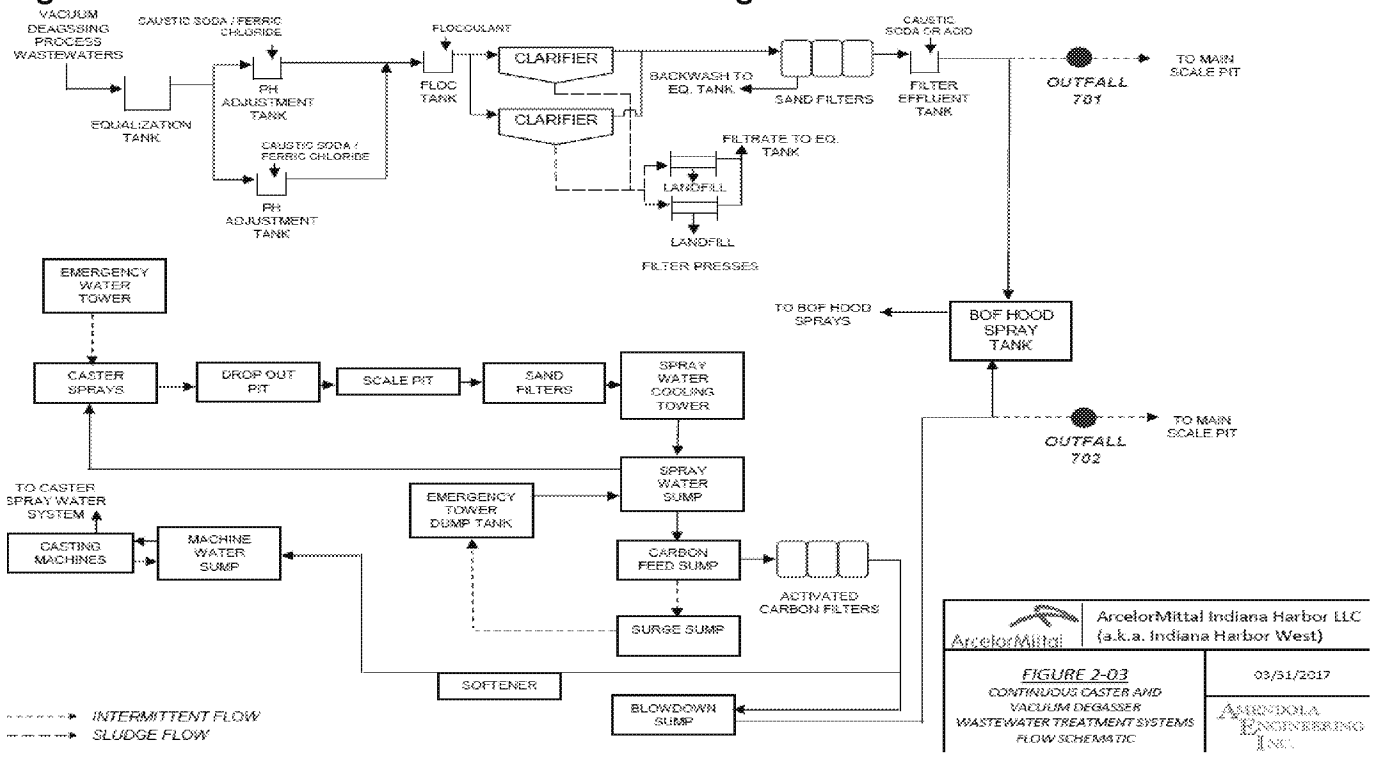
Outfall 701 discharged a total of 12 days from January 2013 to December 2015. Outfall 701 discharges to the Indiana Harbor Ship Canal through Outfall 011.

Internal Outfall 702

The discharge from Outfall 702 comprises treated wastewater from the Continuous Caster wastewater treatment system. The discharge is intermittent and comprises excess flow not evaporated in the BOF gas cleaning system. Outfall 702 discharged a total of 3 days from January 2013 to December 2015.

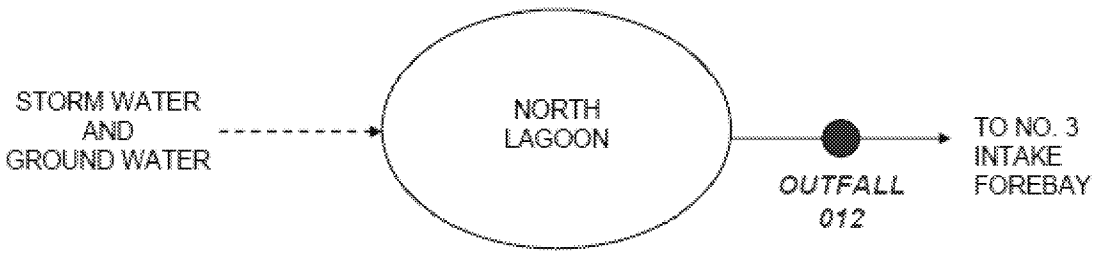
ArcelorMittal will be terminating basic oxygen furnace steelmaking and continuous casting operations at the No. 2 Steel Producing Department at Indiana Harbor East. That production will be picked up at the No. 3 Steel Producing Department at this facility and the No. 4 Steel Producing Department at Indiana Harbor East. Consequently, ironmaking and steelmaking production for this outfall has been increased. A flow diagram of Internal Outfalls 701 and 702 is included as Figure 7.

**Figure 7: Internal Outfalls 701 and 702 Flow Diagram**



Outfall 012
The discharge from Outfall 012 was previously comprised of effluent from the Hot Strip Mill Filter Plant (internal Outfall 111), effluent from the Oily Waste Treatment Plant (internal Outfall 211), non-contact cooling water, storm water and groundwater. However, the facility has shut down the operations at the Hot Strip Mill and No. 3 Cold Mill and Pickler. The outfall structure has been plugged. The facility has requested that Outfall 012 be maintained as an emergency groundwater and stormwater outfall should the need arise for a discharge.

**Figure 8: Outfall 012 Flow Diagram**




Internal Outfall 111 (process idled in March 2016)
The discharge from Outfall 111 was comprised of treated effluent from the Hot Strip Mill Filter Plant. As mentioned above, the Hot Strip Mill has been idled and the facility has requested that this Internal Outfall be removed from the permit.

Internal Outfall 211 (process idled in December 2015)
Internal Outfall 211 was the discharge monitoring location for the Oily Wastewater Treatment Plant (OWTP), which served the No. 3 Cold Mill Complex. The No. 3 Cold Mill Complex has been shut down and the facility has requested that this Internal Outfall be removed from the permit.

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-22-5. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7. IDEM has given the permittee a Class D industrial wastewater treatment plant classification.

## 2.4 Changes in Operation

The Sinter plant at Indiana Harbor West has been shut down since 2010, the No. 3 CSM and Pickling operation were temporarily idled in May 2014, and the 84" Hot Strip Mill was temporarily idled in March 2016. Therefore, they have requested that these operations and associated Internal Outfalls 111, 211, and 411 be removed from the permit and production based standards be recalculated at 509 without provisions for the sinter plant.

ArcelorMittal will be terminating basic oxygen furnace steelmaking and continuous casting operations at the No. 2 Steel Producing Department at Indiana Harbor East. That production will be picked up at the No. 3 Steel Producing Department at this facility and the No. 4 Steel Producing Department at Indiana Harbor East. Consequently, ironmaking and steelmaking production for Internal Outfalls 509, 701, and 702 has been increased.

In addition, due to the above mentioned changes, the facility has requested a reallocation of the 301(g) variance limits for ammonia. The reallocation of variance limits is not included in this permit and may be addressed in a future modification of the permit.

### 2.5 Facility Storm Water

Site storm water is discharged at each outfall without treatment. Storm water monitoring requirements can be found in Section 5.7 of this Fact Sheet.

## 3.0 PERMIT HISTORY

### 3.1 Compliance history

A review of this facility's discharge monitoring data was conducted for compliance verification. This review indicates the following permit limitation violations between October 2013 and November 2016. There are no pending or current enforcement actions regarding this NPDES permit.

Outfall 002
No effluent violations

Outfall 009
Ammonia [2/15; 5/16]; Mercury [6/16]

Outfall 010
Mercury [6/16]

Internal Outfall 509
Total Cyanide [11/15]

Outfall 011
No effluent violations

Internal Outfall 701
Zinc [9/16]

Internal Outfall 702
No effluent violations

Outfall 012
No effluent violations

Internal Outfall 111
No effluent violations



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Internal Outfall 211
Naphthalene [4/14]

Internal Outfall 411
Oil and Grease [2/14; 3/14; 6/14; 7/14; 8/14; 9/14; 10/14; 11/14; 12/14; 1/15; 5/15; 6/15; 8/15; 12/15; 3/16]; TSS [7/14; 10/14; 1/15; 6/15]

## 4.0 RECEIVING WATER

The Indiana Harbor Ship Canal originates at the confluence of the East and West Branches of the Grand Calumet River. It runs north for two miles where it is joined by the Lake George Canal. The Indiana Harbor Ship Canal then runs two miles northeast to the Indiana Harbor. The Indiana Harbor runs one mile to the north before emptying into the open waters of Lake Michigan. The receiving streams for this facility are the Indiana Harbor Ship Canal downstream of the Lake George Canal, the Indiana Harbor, and Lake Michigan. The $Q_{7,10}$ low flow value of the Indiana Harbor Ship Canal is 358 cfs and shall be capable of supporting a well-balanced, warm water aquatic community and full body contact recreation in accordance with 327 IAC 2-1.5-5.

The permittee discharges to a waterbody that has been identified as a high quality water of the state within the Great Lakes system. The Indiana Harbor Ship Canal is a tributary to the Indiana portion of the open waters of Lake Michigan. The Indiana portion of the open waters of Lake Michigan is designated in 327 IAC 2-1.5-19(b)(2) as an Outstanding State Resource Water (OSRW).

In addition to antidegradation implementation procedures under 327 IAC 2-1.3, the Indiana Harbor Ship Canal is subject to other NPDES requirements specific to Great Lakes system dischargers under 327 IAC 2-1.5 and 327 IAC 5-2-11.2 through 327 IAC 5-2-11.6. These rules address water quality standards applicable to dischargers within the Great Lakes system and reasonable potential to exceed water quality standards procedures.

As required by 327 IAC 5-2-11.3(b)(2), language in this renewed permit specifically prohibits the permittee from undertaking deliberate actions that would result in new or increased discharges of BCC's or new or increased permit limits for non-BCC's, or from allowing a new or increased discharge of a BCC from an existing or proposed industrial user, without first proving that the new or increased discharge would not result in a significant lowering of water quality, or by submission and approval of an antidegradation demonstration to the IDEM.

### 4.1 Receiving Stream Water Quality

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop Total

Maximum Daily Loads (TMDLs) for these waters in order to achieve compliance with the water quality standards. Indiana's 2014 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and Total Maximum Daily Load Development for the 2014 Cycle.

The Indiana Harbor Ship Canal (Assessment-Unit INH040400010603), HUC (040400010603)) is on the 2014 303(d) list for E. coli, Impaired Biotic Communities, Oil and Grease, and PCBs in Fish. A TMDL for the Indiana Harbor Ship Canal isn't currently planned. The Indiana Harbor is on the 3014 303(d) list for Free Cyanide, Mercury in Fish Tissue and PCBs in Fish Tissue.

## 5.0 PERMIT LIMITATIONS

Two categories of effluent limitations exist for NPDES permits: Technology-Based Effluent Limits (TBELs) and; Water Quality-Based Effluent Limits (WQBELs).

TBELs are developed by applying the National Effluent Limitation Guidelines (ELGs) established by USEPA for specific industrial categories. TBELs are the primary mechanism of control and enforcement of water pollution under the Clean Water Act (CWA). Technology based treatment requirements under section 301(b) of the CWA represent the minimum level of control/treatment using available technology that must be imposed in a section 402 permit (40 CFR 125.3(a)).

In the absence of ELGs, effluent limits can also be based upon Best Professional Judgment (BPJ). Accordingly, every individual member of a discharge class or category is required to operate their water pollution control technologies according to industry-wide standards and accepted engineering practices. This means that TBELs based upon a BPJ determination are applied at end-of-pipe and mixing zones are not allowed (40 CFR 125.3(a)). Similarly, since the statutory deadlines best practicable technology (BPT), best available technology economically achievable (BAT) and best conventional control technology (BCT) have all passed; compliance schedules for these TBELs are also not allowed.

WQBELs are designed to be protective of the beneficial uses of the receiving water and are independent of the available treatment technology. The WQBELs for this facility are based on water quality criteria in 327 IAC 2-1.5-8 or under the procedures described in 327 IAC 2-1.5-11 through 327 IAC 2-1.5-16 and implementation procedures in 327 IAC 5. Limitations and/or monitoring are required for parameters identified by applications of the reasonable potential to exceed WQBEL under 327 IAC 5-2-11.5.

According to 40 CFR 122.44 and 327 IAC 5, NPDES permit limits are based on either TBELs, where applicable, BPJ, or WQBELs, whichever is most stringent. The decision to limit or monitor the parameters contained in this permit is based on information contained in the permittee's NPDES application. In addition, when performing a permit renewal, existing permit limits must be considered. These may be TBELs, WQBELs, or limits based on BPJ. When renewing a permit, the antibacksliding provisions identified in 327 IAC 5-2-10(11) are taken into consideration.



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## 5.1 Existing Permit Limits

DISCHARGE LIMITATIONS- Outfall 002

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC | 1.5 | 3.5 | lbs/day | 0.016 | 0.037 | mg/l | 5 X Weekly | Grab |
| Mercury | 0.00012 | 0.00030 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly | Grab |
| Temperature | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

DISCHARGE LIMITATIONS- Outfall 009

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC | 5.5 | 13 | lbs/day | 0.012 | 0.028 | mg/l | 5 X Weekly | Grab |
| Ammonia, as N | 425 | 1000 | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| Phenols (4AAP) | Report | 11 | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Zinc[8] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead[8] | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury | | | | | | | | |
| Final | 0.00060 | 0.0015 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly | Grab |
| Temperature | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing | | | | | | | | |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |



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## DISCHARGE LIMITATIONS - Internal Outfall 509

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | 736 | 2,213 | lbs/day | Report | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | 38.1 | 114 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| T. Cyanide | 29.8 | 59.6 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| Ammonia, as N | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| Phenols (4AAP) | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Zinc[2] | 4.46 | 13.4 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |
| Lead[2] | 2.98 | 8.95 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |
| 2,3,7,8-TCDF | ------- | --------- | ------ | ------- | <ML[&] | pg/l | 1 X Monthly | 24-Hr. Comp. |

& ML means less than 10 pg/l

## DISCHARGE LIMITATIONS- Outfall 010

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC | 3.7 | 8.6 | lbs/day | 0.012 | 0.028 | mg/l | 5 X Weekly | Grab |
| Ammonia, as N | 100 | 300 | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| Phenols (4AAP) | Report | 5 | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Zinc | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Lead | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury | | | | | | | | |
| Final | 0.00040 | 0.00098 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly | Grab |
| Temperature | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

## DISCHARGE LIMITATIONS- Outfall 011

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| TRC | 2.5 | 5.9 | lbs/day | 0.013 | 0.030 | mg/l | 5 X Weekly | Grab |
| Ammonia, as N | 75 | 150 | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| Phenols (4AAP) | Report | 5 | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |



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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Zinc | Report | Report | lbs/day | Report | Report | ug/l | 1 X Monthly | 24-Hr. Comp. |
| Lead | Report | Report | lbs/day | Report | Report | ug/l | 1 X Weekly | 24-Hr. Comp. |
| Mercury | | | | | | | | |
| Final | 0.00025 | 0.00062 | lbs/day | 1.3 | 3.2 | ng/l | 6 X Yearly | Grab |
| Temperature | | | | | | | | |
| Intake | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Outfall | ------- | -------- | ------ | Report | Report | °F | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing | | | | | | | | |

Table 2

| | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|
| | Daily | Daily | | Measurement | Sample |
| Parameter | Minimum | Maximum | Units | Frequency | Type |
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

## DISCHARGE LIMITATIONS- Outfall 701

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | 21.2 | 59.4 | lbs/day | Report | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| Zinc | 0.382 | 1.15 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |
| Lead | 0.255 | 0.764 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |

## DISCHARGE LIMITATIONS- Outfall 702

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | 60.3 | 169 | lbs/day | Report | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | 24.0 | 72.4 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| Zinc | 1.08 | 3.26 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |
| Lead | 0.724 | 2.17 | lbs/day | Report | Report | ug/l | 2 X Weekly | 24-Hr. Comp. |

## DISCHARGE LIMITATIONS- Outfall 012

Table 1

| | Quantity or Loading | | | Quality or Concentration | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Monthly | Daily | | Monthly | Daily | | Measurement | Sample |
| Parameter | Average | Maximum | Units | Average | Maximum | Units | Frequency | Type |
| Flow | Report | Report | MGD | ------- | ------- | ----- | 1 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 1 X Weekly | Grab |
| Zinc | Report | Report | lbs/day | Report | Report | ug/l | 1 X Month | 24-Hr. Comp. |
| Lead | Report | Report | lbs/day | Report | Report | ug/l | 1 X Month | 24-Hr. Comp. |
| Mercury | Report | Report | lbs/day | Report | Report | ng/l | 6 X Yearly | Grab |
| TRC | 1.4 | 2.8 | lbs/day | 0.020 | 0.040 | mg/l | 5 X Weekly | Grab |
| Whole Effluent Toxicity | | | | | | | | |



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Table 2

| Parameter | Quality or Concentration Daily Minimum | Daily Maximum | Units | Monitoring Requirements Measurement Frequency | Sample Type |
|---|---|---|---|---|---|
| pH | 6.0 | 9.0 | s.u. | 1 X Weekly | Grab |

## DISCHARGE LIMITATIONS- Outfall 111

Table 1

| Parameter | Quantity or Loading Monthly Average | Daily Maximum | Units | Quality or Concentration Monthly Average | Daily Maximum | Units | Monitoring Requirements Measurement Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | ------- | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | -------- | Report | mg/l | 2 X Weekly | Grab |

## DISCHARGE LIMITATIONS- Outfall 211

Table 1

| Parameter | Quantity or Loading Monthly Average | Daily Maximum | Units | Quality or Concentration Monthly Average | Daily Maximum | Units | Monitoring Requirements Measurement Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | Report | Report | lbs/day | Report | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | Report | Report | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| Zinc | 3.22 | 9.65 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| Lead | 3.25 | 9.3 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |
| Naphthalene | ------- | 1.1 | lbs/day | -------- | Report | mg/l | [&] | Grab |
| Tetrachloroethylene | ---- | 1.68 | lbs/day | -------- | Report | mg/l | [&] | Grab |

[&] Monitoring waiver was granted

## DISCHARGE LIMITATIONS Outfall 411 (combination of 111 and 211)

Table 1

| Parameter | Quantity or Loading Monthly Average | Daily Maximum | Units | Quality or Concentration Monthly Average | Daily Maximum | Units | Monitoring Requirements Measurement Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow | Report | Report | MGD | ------- | ------- | ----- | 2 X Weekly | 24 Hour Total |
| TSS | 4381 | 11365 | lbs/day | Report | Report | mg/l | 2 X Weekly | 24-Hr. Comp. |
| O+G | 1048 | 3089 | lbs/day | Report | Report | mg/l | 2 X Weekly | Grab |



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## 5.2 Technology-Based Effluent Limits (TBEL)

The applicable technology based standards for the wastestreams contributing to the discharges from AM West are contained in 40 CFR 420 – Iron and Steel Manufacturing Point Source Category. Technology-Based Effluent limits apply at end-of-process and apply at internal monitoring points. The following table identifies the applicable standards.

**Applicable ELG Subparts**

| Subpart | Description |
|---|---|
| 40 CFR 420.30<br>Subpart C – Ironmaking Subcategory | Discharges from ironmaking operations in which iron ore is molten in a blast furnace |
| 40 CFR 420.50<br>Subpart E – Vacuum Degassing Subcategory | Discharges from vacuum degassing operations conducted by applying a vacuum to molten steel |
| 40 CFR 420.60<br>Subpart F – Continuous Casting Subcategory | Discharges from the continuous casting of molten steel into intermediate or semi-finished steel products through water cooled molds |

The following is the basis for including TBELs at the respective outfalls:

Outfall 002:
Outfall 002 contains storm water, ground water from basement sumps, and non-contact cooling wastewater from the pickling and hot-dip galvanizing lines. No applicable categorical limits apply.

Outfall 009:
Outfall 009 contains Blast Furnace Recycle System (Internal Outfall 509), non-contact cooling water from the Powerhouse area, storm water and groundwater. Categorical limits will apply at Internal Outfall 509.

Internal Outfall 509:
Internal Outfall 509 consists of the effluent from a wastewater treatment plant for the blast furnace wastewaters (40 CFR 420.30) prior to discharging via Outfall 009.

As noted above, the Sinter Plant has been idled. Therefore, the following TBELs have been calculated without the Sinter Plant in operation. The TBELs for Internal Outfall 509 are established by calculating the applicable pollutant loads for each parameter contained in 40 CFR Part 420.30.

| Total Suspended Solids | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | 0.0260 lbs/1000lbs | 546 | 0.0782 lbs/1000lbs | 1,642 |
| **420.33(a)** (BAT) | | ------- | --------- | -------- | -------- |
| | | | | | |
| TSS Limitation | | 546 lbs/day | | 1,642 lbs/day | |



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[1] Below is an example TSS calculation for Ironmaking Subcategory:

$$\text{TSS Average Monthly Limit} = 10{,}500\frac{tons}{day} \times 2000\frac{lb}{ton} \times 0.0260\frac{lb}{1000lb} = 546\frac{lb}{day}$$

| Lead | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | ---------- | --------- | --------- | -------- |
| **420.33(a)** (BAT) | | 0.0000876 lbs/1000lbs | 1.84 | 0.000263 lbs/1000lbs | 5.52 |
| | | | | | |
| Total Lead Limitation | | 1.84 lbs/day | | 5.52 lbs/day | |

| Zinc | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | ---------- | --------- | --------- | -------- |
| **420.33(a)** (BAT) | | 0.000131 lbs/1000lbs | 2.75 | 0.000394 lbs/1000lbs | 8.27 |
| | | | | | |
| Total Zinc Limitation | | 2.75 lbs/day | | 8.27 lbs/day | |

| Total Cyanide | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | 0.00782 lbs/1000lbs | 164 | 0.0234 lbs/1000lbs | 491 |
| **420.33(a)** (BAT) | | 0.000876 lbs/1000lbs | 18.4 | 0.00175 lbs/1000lbs | 36.8 |
| | | | | | |
| Total Cyanide Limitation | | 18.4 lbs/day | | 36.8 lbs/day | |

| Ammonia, as N | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | 0.0537 lbs/1000lbs | 1,128 | 0.161 lbs/1000lbs | 3,381 |
| **420.33(a)** (BAT) | | 0.00292 lbs/1000lbs | 61.3 | 0.00876 lbs/1000lbs | 184 |
| | | | | | |
| Total Ammonia, as N Limitation | | 61.3 lbs/day | | 184 lbs/day | |



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| Total Residual Chlorine | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | FACILITY DOES NOT CHLORINATE IRONMAKING WASTEWATER. THEREFORE, TRC LIMITATIONS ARE NOT APPLICABLE FROM THIS CATEGORY | | | |
| **420.33(a)** (BAT) | | | | | |
| | | | | | |
| Total Residual Chlorine Limitation | | NOT APPLICABLE | | NOT APPLICABLE | |

| Phenols (4AAP) | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.32(a)** (BPT) | 10,500 Tons/Day | 0.00210 lbs/1000lbs | 44.1 | 0.00626 lbs/1000lbs | 132 |
| **420.33(a)** (BAT) | | 0.0000292 lbs/1000lbs | 0.613 | 0.0000584 lbs/1000lbs | 1.23 |
| | | | | | |
| Total Phenols (4AAP) Limitation | | 0.613 lbs/day | | 1.23 lbs/day | |

The categorical limitations included at Internal Outfall 509 are:

- TSS, Lead, Zinc, and Total Cyanide

  The above mentioned parameters have TBELs that are more stringent than the Water Quality-Based Effluent Limitations (WQBELs). Therefore, the TBELs for monthly average and daily maximums, identified in the tables above, are included at Internal Outfall 509.

- Ammonia-N and Phenols

  Section 301(g) of the Clean Water Act provides variances to BAT limitations. The facility has a previously approved 301(g) variance for ammonia and phenols. That variance approved net limitations for ammonia and phenols for Outfalls 009, 010, and 011. The facility has submitted a request for a continuance of the 301(g) variance for ammonia and phenols (4AAP) with a request to reallocate the mass distribution to account for the current production scenario. IDEM has reviewed the submittal from ArcelorMittal and, as a result of that review, determined that the net limit requirements for the three outfalls will not be reallocated at this time. The permittee may request a modification at a later date to incorporate changes to the 301(g) variance.

Outfall 010:

Outfall 010 consists of storm water, ground water from basement sumps, and non-contact cooling wastewater from the blast furnace, powerhouse and boiler house. Outfall 010 also

collects overflow from Outfall 009 and from the blast furnace recirculation system in the event of an emergency. Categorical limits will apply at Internal Outfall 509.

Outfall 011:
Outfall 011 consists of treated vacuum degassing (40 CFR 420.50), and continuous casting (40 CFR 420.60) process wastewaters. Categorical limits will apply at Internal Outfall 701 and Internal Outfall 702.

Internal Outfall 701:
Internal Outfall 701 consists of the vacuum degasser process wastewater (40 CFR 420.50). As indicated in the previous permit, New Source Performance Standards (NSPS) are included for the vacuum degassing.

The facility usually directs the treated effluent from the vacuum degasser treatment system to the BOF to be evaporated. Therefore, TBELs at Internal Outfall 701 will only apply when wastewater from 701 is expected to be discharged to the receiving stream. Flow at Internal Outfall 701 will be monitored regardless of the wastestream's fate.

| Total Suspended Solids | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.54** (NSPS) | 4,069.1 Tons/Day | 0.00261 lbs/1000lbs | 21.2 | 0.00730 lbs/1000lbs | 59.4 |
| | | | | | |
| Total TSS Limitation | | 21.2 lbs/day | | 59.4 lbs/day | |

| Lead | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.54** (NSPS) | 4,069.1 Tons/Day | 0.0000313 lbs/1000lbs | 0.255 | 0.0000939 lbs/1000lbs | 0.764 |
| | | | | | |
| Total Lead Limitation | | 0.255 lbs/day | | 0.764 lbs/day | |

| Zinc | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.54** (NSPS) | 4,069.1 Tons/Day | 0.0000469 lbs/1000lbs | 0.382 | 0.000141 lbs/1000lbs | 1.15 |
| | | | | | |
| Total Zinc Limitation | | 0.382 lbs/day | | 1.15 lbs/day | |

The categorical limitations included at Internal Outfall 701 are:

- TSS, Lead, and Zinc

The above mentioned parameters have TBELs that are more stringent than the Water Quality-Based Effluent Limitations (WQBELs). Therefore, the TBELs for monthly average and daily maximums, identified in the tables above, are included at Internal Outfall 701.

Internal Outfall 702:

Internal Outfall 702 consists of continuous casting process wastewaters (40 CFR 420.60). As indicated in the previous permit, New Source Performance Standards (NSPS) are included for the continuous casting operations and are more stringent than the BAT/BPT limitations.

The facility usually directs the treated effluent from the continuous casting treatment system to the BOF to be evaporated. Therefore, TBELs at Internal Outfall 702 will only apply when wastewater from 702 is expected to be discharged to the receiving stream. Flow at Internal Outfall 702 will be monitored regardless of the wastestream's fate.

| Total Suspended Solids | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.64** (NSPS) | 11,558.7 Tons/Day | 0.00261 lbs/1000lbs | 60.3 | 0.00730 lbs/1000lbs | 169 |
| | | | | | |
| Total TSS Limitation | | 60.3 lbs/day | | 169 lbs/day | |

| Oil and Grease | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.64** (NSPS) | 11,558.7 Tons/Day | 0.00104 lbs/1000lbs | 24.0 | 0.00313 lbs/1000lbs | 72.4 |
| | | | | | |
| Total O+G Limitation | | 24.0 lbs/day | | 72.4 lbs/day | |

| Lead | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.64** (NSPS) | 11,558.7 Tons/Day | 0.0000313 lbs/1000lbs | 0.724 | 0.0000939 lbs/1000lbs | 2.17 |
| | | | | | |
| Total Lead Limitation | | 0.724 lbs/day | | 2.17 lbs/day | |



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| Zinc | | | | | |
|---|---|---|---|---|---|
| 40 CFR | Production | Monthly Average | | Daily Maximum | |
| | | Categorical Limitation | Subtotal (lbs/day) | Categorical Limitation | Subtotal (lbs/day) |
| **420.64** (NSPS) | 11,558.7 Tons/Day | 0.0000469 lbs/1000lbs | 1.08 | 0.000141 lbs/1000lbs | 3.26 |
| | | | | | |
| Total Zinc Limitation | | 1.08 lbs/day | | 3.26 lbs/day | |

The categorical limitations included at Internal Outfall 702 are:

- TSS, O+G, Lead, and Zinc
  The above mentioned parameters have TBELs that are more stringent than the Water Quality-Based Effluent Limitations (WQBELs). Therefore, the TBELs for monthly average and daily maximums, identified in the tables above, are included at Internal Outfall 702.

Outfall 012:
Outfall 012 is an emergency groundwater and stormwater outfall. No categorical limits apply at this point.

## 5.3 Water Quality-Based Effluent Limits

The water quality-based effluent limitations for this facility are based on water quality criteria in 327 IAC 2-1.5-8 or under the procedures described in 327 IAC 2-1.5-11 through 327 IAC 2-1.5-16 and implementation procedures in 327 IAC 5.

All Outfalls:

*Narrative Water Quality Based Limits*
The narrative water quality contained under 327 IAC 2-1.5-8(b)(1) (A)-(E) have been included in this permit to ensure that the narrative water quality criteria are met.

*Numeric Water Quality Based Limits*
The numeric water quality criteria and values contained in this permit have been calculated using the tables of water quality criteria under 327 IAC 2-1.5-8(b) & (c).

*Flow*
The permittee's flow is to be monitored in accordance with 327 IAC 5-2-13(a)2.

*pH*
Limitations for pH in the proposed permit are taken from 327 IAC 2-1.5-8(c)(2).

*Free cyanide and Fluoride*
Free cyanide and fluoride monitoring was included in the previous permit to determine if a Reasonable Potential to Exceed (RPE) Indiana WQBELs exists. Based on a review of the previous permit cycle's data, it was determined that an

RPE for these parameters does not exist. Therefore, these parameters are removed from this permit.

Outfall 002:

*Oil and Grease (O+G), Total Suspended Solids (TSS), and Temperature*
The above mentioned parameters are carried over from the previous permit. Reporting requirements will be included for the above mentioned parameters at Outfall 002.

*Total Residual Chlorine (TRC)*
The TRC effluent limit was calculated in a WLA and is 1.6 lbs/day (0.016 mg/l) for monthly average and 3.8 lbs/day (0.037 mg/l) for the daily maximum. The limit is included because the facility chlorinates/dechlorinates water. The daily maximum WQBEL for TRC is greater than the Level of Detection (LOD) but less than the Level of Quantization (LOQ). Compliance with the daily maximum concentration limit will be demonstrated if the observed effluent concentrations are less than the LOQ (0.06 mg/l). Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 6.1 lbs/day. This is calculated by multiplying the LOQ by the discharge flow in MGD and by a conversion factor of 8.345. Monitoring for TRC shall be performed during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

*Mercury*
Mercury limitations were included in the previous permit because it was identified in quantities that showed a Reasonable Potential to Exceed (RPE) Indiana's Water Quality Criteria. A schedule of compliance was granted during the previous permit cycle and ArcelorMittal was required to submit a Quality Assurance Project Plan (QAPP) to identify sources of mercury in the discharge along with a Final Plan for Compliance (FPC) to meet the mercury limits. The FPC dated March 1, 2015 provides intake and effluent data for mercury during dry and wet weather. The FPC identifies the most likely source of mercury in the discharge as being mercury present in intake water withdrawn from Indiana Harbor Ship Canal and Lake Michigan.

For this permit renewal, the reasonable potential analysis for mercury for Outfall 002 was done in accordance with the provision for discharges of once-through noncontact cooling water in 327 IAC 5-2-11.5(g). This provision may be used if the intake and outfall points for the noncontact cooling water are located on the same body of water. The cooling water intake source for Outfall 002 is primarily Lake Michigan with a minor portion from the Indiana Harbor Canal. In accordance with 327 IAC 5-2-11.5(b)(4)(B)(iv), an intake pollutant shall be considered to be from the same body of water as the discharge if the intake point is located on Lake Michigan and the outfall point is located on a tributary of Lake Michigan and the following conditions are met:



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(A) The representative background concentration of the pollutant in the receiving water, as determined under 327 IAC 5-2-11.4(a)(8) (excluding any amount of the pollutant in the facility's discharge) is similar to or greater than that in the intake water.
(B) Any difference in a water quality characteristic (such as temperature, pH, and hardness) between the intake and receiving waters does not result in an adverse impact on the receiving water.

The FPC included mercury data for the Indiana Harbor Canal and Lake Michigan. A review of the data showed that the concentration of mercury in the Indiana Harbor Canal is greater than the concentration in Lake Michigan. Any differences in a water quality characteristic are not significant enough to cause adverse impacts. Therefore, the same body of water provision is applicable.
In accordance with 5-2-11.5(g)(6), if a wastestream consisting solely of noncontact cooling water combines with one or more wastestreams not consisting solely of noncontact cooling water, this provision may still be applied to the wastestream consisting solely of noncontact cooling water if, for the wastestreams that do not consist solely of noncontact cooling water, the following requirements are imposed:

(A) For each wastestream composed entirely of storm water, permit conditions that the commissioner determines to be necessary to protect the water quality of the receiving waterbody shall be imposed. The requirements imposed shall be as if the storm water wastestream discharged directly into the receiving waterbody and shall be consistent with requirements imposed on other similar storm water discharges to the waterbody.
(B) For each wastestream not composed entirely of storm water, each wastestream shall be evaluated to determine if there is reasonable potential using the procedures in 5-2-11.5. For purposes of determining reasonable potential and developing WQBELs for these wastestreams, the WLAs shall be determined as if these wastestreams discharged directly into the receiving waterbody without combining with the wastestreams consisting solely of noncontact cooling water.

The storm water discharges to Outfall 002 will receive non-numeric limits consistent with storm water discharges to the other ArcelorMittal outfalls. The groundwater and miscellaneous non-process wastewaters are not considered significant discharges to Outfall 002 in regards to mercury. Therefore, based on the provision in 5-2-11.5(g), there is not a reasonable potential to exceed a water quality criterion for mercury.

Outfall 009:

*O+G, TSS, Lead, and Zinc*
The above mentioned parameters are identified in the federally promulgated guidelines for this facility. The WQBELs for the above mentioned parameters are less stringent than the TBELs. TBELs will be limited at Internal Outfall 509. However, reporting requirements will be included for the above mentioned parameters at Outfall 009.



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*Temperature*
Based on the results of instream sampling and a multi-discharger thermal model, the discharges from AM West do not have a reasonable potential to exceed a water quality criterion for temperature. However, in accordance with 327 IAC 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Therefore, monitoring for temperature included at this outfall.

*Total Residual Chlorine (TRC)*
The TRC effluent limit was calculated in the WLA and is 5.3 lbs/day (0.012 mg/l) for monthly average and 12 lbs/day (0.028 mg/l) for the daily maximum. The limit is included because the facility chlorinates/dechlorinates water. The daily maximum WQBEL for TRC is greater than the Level of Detection (LOD) but less than the Level of Quantization (LOQ). Compliance with the daily maximum concentration limit will be demonstrated if the observed effluent concentrations are less than the LOQ (0.06 mg/l). Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 26.3 lbs/day. This is calculated by multiplying the LOQ by the discharge flow in MGD and by a conversion factor of 8.345. Monitoring for TRC shall be performed during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

*Ammonia-N and Phenols*
Section 301(g) of the Clean Water Act provides variances to BAT limitations. The facility has a previously approved 301(g) variance for ammonia and phenols. That variance approved net limitations for ammonia and phenols for Outfalls 009, 010, and 011. IDEM has reviewed the submittal from ArcelorMittal and, as a result of that review, determined that the net limit requirements for the three outfalls shall remain in the permit.

*Mercury*
Mercury limitations were included in the previous permit because it was identified in quantities that showed a Reasonable Potential to Exceed (RPE) Indiana's Water Quality Criteria. WQBELs for mercury were calculated in the WLA report and identified the monthly average as 0.00057 lbs/day (1.3 ng/l) and the daily maximum as 0.0014 lbs/day (3.2 ng/l). A schedule of compliance and then a streamlined mercury variance was granted during the previous permit cycle. The streamlined mercury variance became effective September 1, 2016. Therefore, the annual average interim limits of 1.9 ng/l still apply.

Outfall 010:

*O+G, TSS, Lead, and Zinc*
The above mentioned parameters are identified in the federally promulgated guidelines for this facility at Outfall 009. Since Outfall 010 accepts an overflow from 009, TBELs are still applicable at Internal Outfall 509. In addition, reporting requirements for the above mentioned parameters will be included at Outfall 010.



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*Total Residual Chlorine (TRC)*
The TRC effluent limit was calculated in the WLA and is 4.7 lbs/day (0.012 mg/l) for monthly average and 11 lbs/day (0.028 mg/l) for the daily maximum. The limit is included because the facility chlorinates/dechlorinates water. The daily maximum WQBEL for TRC is greater than the Level of Detection (LOD) but less than the Level of Quantization (LOQ). Compliance with the daily maximum concentration limit will be demonstrated if the observed effluent concentrations are less than the LOQ (0.06 mg/l). Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 23.7 lbs/day. This is calculated by multiplying the LOQ by the discharge flow in MGD and by a conversion factor of 8.345. Monitoring for TRC shall be performed during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

*Temperature*
Based on the results of instream sampling and a multi-discharger thermal model, the discharges from AM West do not have a reasonable potential to exceed a water quality criterion for temperature. However, in accordance with 327 IAC 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Therefore, monitoring for temperature and thermal discharge is included at this outfall.

*Ammonia and Phenols*
Section 301(g) of the Clean Water Act provides variances to BAT limitations. The facility has a previously approved 301(g) variance for ammonia and phenols. That variance approved net limitations for ammonia and phenols for Outfalls 009, 010, and 011. The facility has submitted a request for a continuance of the 301(g) variance for ammonia and phenols (4AAP). IDEM has reviewed the submittal from ArcelorMittal and, as a result of that review, determined that the net limit requirements for the three outfalls shall remain in the permit.

*Mercury*
Mercury limitations were included in the previous permit because it was identified in quantities that showed a Reasonable Potential to Exceed (RPE) Indiana's Water Quality Criteria. WQBELs for mercury were calculated in the WLA report and identified the monthly average as 0.00051 lbs/day (1.3 ng/l) and the daily maximum as 0.0013 lbs/day (3.2 ng/l). A schedule of compliance and then a streamlined mercury variance was granted during the previous permit cycle. The streamlined mercury variance became effective September 1, 2016. Therefore, the annual average interim limits of 1.6 ng/l still apply.

Outfall 011:

*TSS, O+G, Lead and Zinc*
The above mentioned parameters are identified in the federally promulgated guidelines for this facility. The WQBELs for the above mentioned parameters is less stringent than the TBELs. TBELs will be monitored at Internal Outfalls 701

and 702. However, reporting requirements will be included for the above mentioned parameters at Outfall 011.

*Ammonia and Phenols*
Section 301(g) of the Clean Water Act provides variances to BAT limitations. The facility has a previously approved 301(g) variance for ammonia and phenols. That variance approved net limitations for ammonia and phenols for Outfalls 009, 010, and 011. The facility has submitted a request for a continuance of the 301(g) variance for ammonia and phenols (4AAP). IDEM has reviewed the submittal from ArcelorMittal and, as a result of that review, determined that the net limit requirements for the three outfalls shall remain in the permit.

*Temperature*
Based on the results of instream sampling and a multi-discharger thermal model, the discharges from AM West do not have a reasonable potential to exceed a water quality criterion for temperature. However, in accordance with 327 IAC 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Therefore, monitoring for temperature and thermal discharge is included at this outfall.

*Total Residual Chlorine (TRC)*
The TRC effluent limit was calculated in the WLA and is 2.4 lbs/day (0.013 mg/l) for monthly average and 5.7 lbs/day (0.031 mg/l) for the daily maximum. The limit is included because the facility chlorinates/dechlorinates water. The daily maximum WQBEL for TRC is greater than the Level of Detection (LOD) but less than the Level of Quantization (LOQ). Compliance with the daily maximum concentration limit will be demonstrated if the observed effluent concentrations are less than the LOQ (0.06 mg/l). Compliance with the daily maximum mass value will be demonstrated if the calculated mass value is less than 11.1 lbs/day. This is calculated by multiplying the LOQ by the discharge flow in MGD and by a conversion factor of 8.345. Monitoring for TRC shall be performed during Zebra or Quagga mussel intake chlorination, and continue for three additional days after Zebra or Quagga mussel treatment has been completed.

*Mercury*
Mercury limitations were included in the previous permit because it was identified in quantities that showed a Reasonable Potential to Exceed (RPE) Indiana's Water Quality Criteria. Therefore, WQBELs for mercury were calculated in the WLA report and identify the monthly average as 0.00024 lbs/day (1.3 ng/l) and the daily maximum as 0.00059 lbs/day (3.2 ng/l).

Outfall 012

*TSS, O+G, Zinc, and Lead*
The above parameters were previously monitored at Outfall 012. As previously mentioned, this outfall has been plugged and only remains as an emergency



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groundwater and storm water outfall. Therefore, reporting requirements for the above permits are included in this permit and shall be monitored in the event a discharge occurs.

## 5.4 Whole Effluent Toxicity Testing (WETT)

Per 327 IAC 5-2-11.5(c)(2), the commissioner may include, in the NPDES permit, WETT requirements to generate the data needed to adequately characterized the toxicity of the effluent to aquatic life.

In accordance with 327 IAC 2-1.5-8, at all times the discharge from any and all point sources specified within this permit shall not cause receiving waters including the mixing zone, to contain substances, materials, floating debris, oil, scum, or other pollutants: 1) which are in amounts sufficient to be acutely toxic to or to otherwise severely injure or kill aquatic life, other animals, plants, or humans; and 2) outside the mixing zone, to contain substances in concentrations which on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

A discharge shall not cause acute toxicity, as measured by whole effluent toxicity tests (WETT), at any point in the waterbody. To assure protection of aquatic life, a discharge shall not cause chronic toxicity, as measured by whole effluent toxicity tests, outside of the applicable mixing zone.

Therefore, the permittee is required to continue to conduct WETT to determine the toxicity of the final effluent. This does not preclude the requirement to submit WTA application(s) and/or worksheet(s) for the replacement or new additives/chemicals proposed for use at the site.

## 5.5 Antibacksliding

None of the limits included in this permit conflict with antibacksliding regulations found in 327 IAC 5-2-10(11), therefore, backsliding is not an issue.

## 5.6 Antidegradation

327 IAC 2-1.3 outlines the state's Antidegradation Standards and Implementation procedures. The Tier 1 antidegradation standard found in 327 IAC 2-1.3-3(a) applies to all surface waters of the state regardless of their existing water quality. Based on this standard, for all surface waters of the state, the existing uses and level of water quality necessary to protect those existing uses shall be maintained and protected. IDEM implements the Tier 1 antidegradation standard by requiring NPDES permits to contain effluent limits and best management practices (BMPs) for regulated pollutants that ensure the narrative and numeric water quality criteria applicable to each of the designated uses are achieved in the water and any designated uses of the downstream water are maintained and protected.

The Tier 2 antidegradation standard found in 327 IAC 2-1.3-3(b) applies to surface waters of the state where the existing quality for a parameter is better than the water quality criterion for that parameter established in 327 IAC 2-1-6 or 327 IAC 2-1.5. These surface

waters are considered high quality for the parameter and this high quality shall be maintained and protected unless the commissioner finds that allowing a significant lowering of water quality is necessary and accommodates important social or economic development in the area in which the waters are located. IDEM implements the Tier 2 antidegradation standard for regulated pollutants with numeric water quality criteria quality adopted in or developed pursuant to 327 IAC 2-1-6 or 327 IAC 2-1.5 and utilizes the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6.

According to 327 IAC 2-1.3-1(b), the antidegradation implementation procedures in 327 IAC 2-1.3-5 and 2-1.3-6 apply to a proposed new or increased loading of a regulated pollutant to surface waters of the state from a deliberate activity subject to the Clean Water Act (CWA), including a change in process or operation that will result in a significant lowering of water quality.

The NPDES permit does not propose to establish a new or increased loading of a regulated pollutant; therefore, the Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 do not apply to the permitted discharge.

The permittee is prohibited from undertaking any deliberate action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless information is submitted to the commissioner demonstrating that the proposed new or increased discharge will not cause a significant lowering of water quality, or an antidegradation demonstration submitted and approved in accordance 327 IAC 2-1.3.

## 5.7 Storm Water

According to 40 CFR 122.26(b)(14)(ii) and 327 IAC 5-4-6(b)(1) facilities classified under Industrial Classification (SIC) Code 3312, are considered to be engaging in "industrial activity" for purposes of 40 CFR 122.26(b). Therefore, the permittee is required to have all storm water discharges associated with industrial activity permitted. Treatment for storm water discharges associated with industrial activities is required to meet, at a minimum, best available technology economically achievable/best conventional pollutant control technology (BAT/BCT) requirements. EPA has determined that non-numeric technology-based effluent limits have been determined to be equal to the best practicable technology (BPT) or BAT/BCT for storm water associated with industrial activity.

Storm water associated with industrial activity must be assessed to determine compliance with all water quality standards. The non-numeric storm water conditions and effluent limits contain the technology-based effluent limitations. Effluent limitations, as defined in the CWA, are restrictions on quantities, rates, and concentrations of constituents which are discharged. Effective implementation of these requirements should meet the applicable water quality based effluent limitations. Violation of any of these effluent limitations constitutes a violation of the permit.

Additionally, IDEM has determined that with the appropriate implementation of the required control measures and Best Management Practices (BMPs) found in Part I.D. of the permit, the discharge of storm water associated with industrial activity from this facility will meet applicable water quality standards and will not cause a significant lowering of



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water quality. Therefore, the storm water discharge is in compliance with Antidegradation Standards and Implementation Procedures found in 327 IAC 2-1.3 and an Antidegradation Demonstration is not required.

The TBELs require the permittee to minimize exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. In doing so, the permittee is required, to the extent technologically available and economically achievable, to either locate industrial materials and activities inside or to protect them with storm resistant coverings. In addition, the permittee is required to: (1) use good housekeeping practices to keep exposed areas clean, (2) regularly inspect, test, maintain and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in storm water discharges, (3) minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur, (4) stabilize exposed area and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants, (5) divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the permitted facility discharges, (6) enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, (7) train all employees who work in areas where industrial materials or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team, (8) ensure that waste, garbage and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged, and (9) minimize generation of dust and off-site tracking of raw, final or waste materials.

To meet the non-numeric effluent limitations in Part I.D.4, the permit requires the facility to select control measures (including BMPs) to address the selection and design considerations in Part I.D.3.

The permittee must control its discharge as necessary to meet applicable water quality standards. It is expected that compliance with the non-numeric effluent limitations and other terms and conditions in this permit will meet this effluent limitation. However, if at any time the permittee, or IDEM, determines that the discharge causes or contributes to an exceedance of applicable water quality standards, the permittee must take corrective actions, and conduct follow-up monitoring.

**"Terms and Conditions" to Provide Information in a Storm Water Pollution Prevention Plan (SWPPP)**

Distinct from the effluent limitation provisions in the permit, the permit requires the discharger to prepare a SWPPP for the permitted facility. The SWPPP is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limits set forth in Part I.D. of the permit. In general, the SWPPP must be kept up-to-date, and modified when necessary, to reflect any changes in control measures that were found to be necessary to meet the effluent limitations in the permit.



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The requirement to prepare a SWPPP is not an effluent limitation, rather it documents what practices the discharger is implementing to meet the effluent limitations in Part I.D. of the permit. The SWPPP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWPPP is a permit "term or condition" authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, "[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate." The SWPPP requirements set forth in this permit are terms or conditions under the CWA because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWPPP and keep it up-to-date is no different than other information collection conditions, as authorized by section 402(a)(2).

It should be noted that EPA has developed a guidance document, "Developing your Storm Water Pollution Prevention Plan – A guide for Industrial Operators (EPA 833-B09-002), February 2009, to assist facilities in developing a SWPPP. The guidance contains worksheets, checklists, and model forms that should assist a facility in developing a SWPPP.

**Public availability of documents**

Part I.E.2.d(2) of the permit requires that the permittee retain a copy of the current SWPPP at the facility and it must be immediately available, at the time of an onsite inspection or upon request, to IDEM. Additionally, interested persons can request a copy of the SWPPP through IDEM. By requiring members of the public to request a copy of the SWPPP through IDEM, the Agency is able to provide the permittees with assurance that any Confidential Business Information contained within the permitted facility's SWPPP is not released to the public.

## 5.8 Water Treatment Additives

In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of any of the additives contributing to each respective Outfall, the permittee shall notify the IDEM as required in Part II.C.1 of the permit. The use of any new or changed water treatment additives/chemicals or dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates. The following is a list of water treatment additives currently approved for use at the facility: Bleach; NALSPERSE 73551; Nalco 7408; NALCLEAR 7766; Sulfuric Acid; Sodium Hydroxide; Ultrion 8187; Nalco SURE-COOL 1393; Nalco 3DT195; Nalco CORE SHELL 71301; Nalco ELIMIN-OX; Nalco NexGuard 22300; Nalco 1720; Nalco 3DT179; Nalco 3DT190; Nalco 1392; Nalco Tri-ACR 1800; Ferric Chloride; Hydrated Lime; Nalco 7408; Nalco 8103P; NALSPERSE 7308; Nalco 8187; Nalco 7465; and Nalco 8356D.



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## 6.0 PERMIT DRAFT DISCUSSION

### 6.1 Discharge Limitations

The proposed final effluent limitations are based on the more stringent of the Indiana WQBELs, TBELS, or approved TMDLs and NPDES regulations as appropriate for each regulated outfall. Sections 5.2 and 5.3 of this document explain the rationale for the effluent limitations at each Outfall.

Outfall 002

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | Report | Report | mg/l & lbs/d | WQBEL |
| O & G | Report | Report | mg/l & lbs/d | WQBEL |
| Chlorine, Total Residual (TRC) | 1.6<br>0.016 | 3.8<br>0.037 | lbs/d<br>mg/l | WQBEL |
| Mercury | Report | Report | lbs/d & ng/l | WQBEL |
| Temperature | Report | Report | °F | WQBEL |

| Parameter | Daily Minimum | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| pH | 6.0 | 9.0 | Std Units | WQBEL |

Outfall 009

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | Report | Report | mg/l & lbs/d | WQBEL |
| O & G | Report | Report | mg/l & lbs/d | WQBEL |
| Lead | Report | Report | ug/l & lbs/d | WQBEL |
| Zinc | Report | Report | ug/l & lbs/d | WQBEL |
| Ammonia, as N | 425<br>Report | 1000<br>Report | lbs/d<br>mg/l | 301(g) |
| Phenols (4AAP) | Report<br>Report | 11<br>Report | lbs/d<br>mg/l | 301(g) |
| Chlorine, Total Residual (TRC) | 5.3<br>0.012 | 12<br>0.028 | lbs/d<br>mg/l | WQBEL |
| Mercury<br><br>Interim | 0.00057<br>1.3<br>1.9 | 0.0014<br>3.2<br>Report | lbs/d<br>ng/l<br>ng/l | WQBEL<br><br>SMV |
| Temperature | Report | Report | °F | WQBEL |
| Whole Effluent Toxicity Testing | 2.3 | <br>1.0 | TUc<br>TUa | WQBEL |

| Parameter | Daily Minimum | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|



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| | | | | |
|---|---|---|---|---|
| pH | 6.0 | 9.0 | Std Units | WQBEL |

Internal Outfall 509:

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | 546<br>Report | 1642<br>Report | lbs/d<br>mg/l | TBEL |
| Lead | 1.84<br>Report | 5.52<br>Report | lbs/d<br>ug/l | TBEL |
| Zinc | 2.75<br>Report | 8.27<br>Report | lbs/d<br>ug/l | TBEL |
| Ammonia, as N | Report<br>Report | Report<br>Report | lbs/d<br>mg/l | 301(g) |
| Phenols (4AAP) | Report<br>Report | Report<br>Report | lbs/d<br>mg/l | 301(g) |
| Total Cyanide | 18.4<br>Report | 36.8<br>Report | lbs/d<br>mg/l | TBEL |

Outfall 010

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | Report | Report | mg/l & lbs/d | WQBEL |
| O & G | Report | Report | mg/l & lbs/d | WQBEL |
| Lead | Report | Report | ug/l & lbs/d | WQBEL |
| Zinc | Report | Report | ug/l & lbs/d | WQBEL |
| Ammonia, as N | 100<br>Report | 300<br>Report | lbs/d<br>mg/l | 301(g) |
| Phenols (4AAP) | Report<br>Report | 5<br>Report | lbs/d<br>mg/l | 301(g) |
| Chlorine, Total Residual (TRC) | 4.7<br>0.012 | 11<br>0.028 | lbs/d<br>mg/l | WQBEL |
| Mercury<br><br>Interim | 0.00051<br>1.3<br>1.6 | 0.0013<br>3.2<br>Report | lbs/d<br>ng/l<br>ng/l | WQBEL<br><br>SMV |
| Temperature | Report | Report | °F | WQBEL |

| Parameter | Daily Minimum | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| pH | 6.0 | 9.0 | Std Units | WQBEL |

Outfall 011

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | Report | Report | mg/l & lbs/d | WQBEL |
| O & G | Report | Report | mg/l & lbs/d | WQBEL |
| Lead | Report | Report | ug/l & lbs/d | WQBEL |
| Zinc | Report | Report | ug/l & lbs/d | WQBEL |
| Ammonia, as N | 75<br>Report | 150<br>Report | lbs/d<br>mg/l | 301(g) |
| Phenols (4AAP) | Report<br>Report | 5<br>Report | lbs/d<br>mg/l | 301(g) |
| Chlorine, Total Residual (TRC) | 2.4<br>0.013 | 5.7<br>0.031 | lbs/d<br>mg/l | WQBEL |
| Mercury | 0.00024<br>1.3 | 0.00059<br>3.2 | lbs/d<br>ng/l | WQBEL |
| Temperature | Report | Report | °F | WQBEL |
| Whole Effluent Toxicity Testing | 5.6 | <br>1.0 | TUc<br>TUa | WQBEL |

| Parameter | Daily Minimum | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| pH | 6.0 | 9.0 | Std Units | WQBEL |

Internal Outfall 701

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | 21.2<br>Report | 59.4<br>Report | lbs/d<br>mg/l | TBEL |
| Lead | 0.255<br>Report | 0.764<br>Report | lbs/d<br>ug/l | TBEL |
| Zinc | 0.382<br>Report | 1.15<br>Report | lbs/d<br>ug/l | TBEL |

Internal Outfall 702

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | 60.3<br>Report | 169<br>Report | lbs/d<br>mg/l | TBEL |
| O & G | 24.0<br>Report | 72.4<br>Report | lbs/d<br>mg/l | TBEL |
| Lead | 0.724 | 2.17 | lbs/d | TBEL |

| | | | | |
|---|---|---|---|---|
| | Report | Report | ug/l | |
| Zinc | 1.08<br>Report | 3.26<br>Report | lbs/d<br>ug/l | TBEL |

Outfall 012

| Parameter | Monthly Average | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| Flow | Report | Report | MGD | IAC |
| TSS | Report | Report | mg/l & lbs/d | WQBEL |
| O & G | Report | Report | mg/l & lbs/d | WQBEL |
| Lead | Report | Report | ug/l & lbs/d | WQBEL |
| Zinc | Report | Report | ug/l & lbs/d | WQBEL |

| Parameter | Daily Minimum | Daily Maximum | Units | Source of Limitation |
|---|---|---|---|---|
| pH | 6.0 | 9.0 | Std Units | WQBEL |

## 6.2 Monitoring Conditions and Rationale

Analytical and sampling methods used shall conform to the version of 40 CFR 136 as referenced in 327 IAC 5-2-13(d)(1).

Outfall 002

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Weekly | 24 Hr. Comp. |
| O & G | 1 X Weekly | Grab |
| Chlorine, Total Residual (TRC) | 5 X Weekly | Grab |
| Mercury | Bi-Monthly | Grab |
| Temperature | 2 X Weekly | Grab |
| pH | 1 X Weekly | Grab |

Outfall 009

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Weekly | 24 Hr. Comp. |
| O & G | 1 X Weekly | Grab |
| Lead | 1 X Weekly | 24 Hr. Comp. |
| Zinc | 1 X Weekly | 24 Hr. Comp. |
| Ammonia, as N | 1 X Weekly | 24 Hr. Comp. |
| Phenols (4AAP) | 1 X Weekly | Grab |
| Chlorine, Total Residual | 5 X Weekly | Grab |

| | | |
|---|---|---|
| (TRC) | | |
| Mercury | Bi-Monthly | Grab |
| Temperature | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing | See Part I.F of the Permit | |
| pH | 1 X Weekly | Grab |

Internal Outfall 509

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Weekly | 24 Hr. Comp. |
| O & G | 1 X Weekly | Grab |
| Lead | 1 X Weekly | 24 Hr. Comp. |
| Zinc | 1 X Weekly | 24 Hr. Comp. |
| Ammonia, as N | 1 X Weekly | 24 Hr. Comp. |
| Phenols (4AAP) | 1 X Weekly | Grab |
| Total Cyanide | 1 X Weekly | Grab |

Outfall 010

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Week | 24 Hr. Comp. |
| O & G | 1 X Week | Grab |
| Lead | 1 X Week | 24 Hr. Comp. |
| Zinc | 1 X Weekly | 24 Hr. Comp. |
| Ammonia, as N | 1 X Weekly | 24 Hr. Comp. |
| Phenols (4AAP) | 1 X Weekly | Grab |
| Chlorine, Total Residual (TRC) | 5 X Weekly | Grab |
| Mercury | Bi-Monthly | Grab |
| Temperature | 2 X Weekly | Grab |
| pH | 1 X Weekly | Grab |

Outfall 011

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Weekly | 24 Hr. Comp. |
| O & G | 1 X Weekly | Grab |
| Lead | 1 X Weekly | 24 Hr. Comp. |
| Zinc | 1 X Monthly | 24 Hr. Comp. |
| Ammonia, as N | 1 X Weekly | 24 Hr. Comp. |
| Phenols (4AAP) | 1 X Weekly | Grab |

| | | |
|---|---|---|
| Chlorine, Total Residual (TRC) | 5 X Weekly | Grab |
| Mercury | Bi-Monthly | Grab |
| Temperature | 2 X Weekly | Grab |
| Whole Effluent Toxicity Testing | See Part I.F of the permit | |
| pH | 1 X Weekly | Grab |

Internal Outfall 701

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 2 X Weekly | 24 Hr. Total |
| TSS | 2 X Weekly | 24 Hr. Comp. |
| Lead | 2 X Weekly | 24 Hr. Comp. |
| Zinc | 2 X Weekly | 24 Hr. Comp. |

Internal Outfall 702

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 2 X Weekly | 24 Hr. Total |
| TSS | 2 X Weekly | 24 Hr. Comp. |
| O & G | 2 X Weekly | Grab |
| Lead | 2 X Weekly | 24 Hr. Comp. |
| Zinc | 2 X Weekly | 24 Hr. Comp. |

Outfall 012

| Parameter | Minimum Frequency | Sample Type |
|---|---|---|
| Flow | 1 X Weekly | 24 Hr. Total |
| TSS | 1 X Weekly | 24 Hr. Comp. |
| O & G | 1 X Weekly | Grab |
| Lead | 1 X Weekly | 24 Hr. Comp. |
| Zinc | 1 X Weekly | 24 Hr. Comp. |
| pH | 1 X Weekly | Grab |

## 6.3 Schedule of Compliance

There are no effluent limits or other requirements that require a schedule of compliance.



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## 6.4 Special Conditions and Other Permit Requirements

### 6.4.1 Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS)

**Introduction**

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a Clean Water Act (CWA) section 316(b) regulation on August 15, 2014, that establishes standards for cooling water intake structures. 79 Fed. Reg. 48300-439 (August 15, 2014). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities and it became effective on October 14, 2014.

For permits expiring prior to July 2018, the permittee can (1) negotiate an alternative schedule for submitting required information with the Director (IDEM) after demonstrating need, or (2) request waiver(s) for submitting required information. An alternative schedule for submission of information required under the current CWA section 316(b), or waiver(s) of submittal requirements shall be reviewed and approved by IDEM. Upon approval of such alternative schedules and /or waivers, or until the time the required information/reports are submitted and the permit is renewed or modified following public notice, the IDEM is required to make a BTA determination using Best Professional Judgment (BPJ) to comply with CWA Section 316(b) based on existing information. The BTA determination is subject to change after the required information is submitted in accordance with the federal regulations effective October 14, 2014.

A copy of the permit renewal application was sent to U.S. Fish and Wildlife on June 6, 2016. No comments were received.

Indiana Harbor West completed an impingement and entrainment study and report required by its current permit at about the same time the permit renewal application was due. This study was dictated by the current NPDES permit before promulgation of the final rules with the intent that it would meet the requirements of the final rule. Unfortunately, the final rule changed in the interim and the study contained some, but not all, of the information required by 40 CFR 122.21(r). Since this study was a permit requirement, resources were focused on the completion of the study rather than assembling all of the information required by 40 CFR 122.21(r). Therefore, additional time is needed to evaluate the results of the study as well as assemble the remainder of the required information. The permittee is required to submit the information as soon as practicable, but no later than July 14, 2018.



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## Intake Water Structures Descriptions

No. 1 Pump House

- Indiana Harbor and Ship Canal is the source water.
- The No. 1 Pump House is located in the interior of the Plant at the terminus of a narrow intake canal approximately 1,000 ft long and 7 ft wide. The pump house was constructed in 1939 to provide cooling water and process make-up water to the No. 3 and 4 Blast Furnaces. The pump house was initially designed to contain six service pumps of various capacities. Since then the pumps have been replaced and two removed entirely.
- Currently, only two pumps are operational.
- 49 MGD effective design intake capacity.
- Four vertical traveling screens (single entry/exit) in a common wet well. Two screens have been retrofitted to function in a fixed panel mode utilizing No. 0.51 diamond-shaped, flattened-expanded aluminum mesh. Of the remaining two vertical traveling screens, one has been removed and screen opening blocked. The other is fitted with 0.50" stainless steel square-mesh screening.
- 0.42 ft/s velocity under normal operating conditions as calculated by the permittee.
- 0.86 ft/s total rated capacity velocity as calculated by the permittee.
- Fixed screens are manually removed and washed as needed. The traveling screen includes a wash system used to remove impinged debris and/or fish, which are washed into one of two collection baskets. Collection basket contents are returned manually discarded.

No. 2 Pump House

- Lake Michigan is the source water.
- The No. 2 Pump House is located at the terminus of an intake canal approximately 1.2 miles long and 70 feet wide, opening to 300 feet at the entrance to the pump house forebay. The No. 2 Pump House was originally designed with three circulating pumps and two service pumps.
- Currently, only two circulating pumps and one service pump is in operation.
- 87 MGD flow based on current and fixed pump configuration and operation.
- Centralized Screen House that serves the No. 2 Pump House, Low Head Pump House, and Power House Pump House. The only potential for entrainment and/or impingement as a result of operation of the No. 2 Pump House is at the Centralized Screen House.
- Three vertical traveling screens (single entry/exit) in a common wet well with 0.35" stainless steel square-mesh screening and two fixed panel screens utilizing No. 0.51 diamond-shaped, flattened-expanded aluminum mesh.
- 1.66 ft/s velocity under normal operating conditions as calculated by the permittee.
- 2.66 ft/s total rated capacity velocity as calculated by the permittee.
- Fixed screens are manually removed and washed as needed. Traveling screens include a wash system used to remove impinged debris and/or fish,



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which are washed into a common collection basket. The collection basket contents are returned manually discarded.

Low Head Pump House

- After passing through screens in the Common Screen House, water is directed via vertical shaft to a deep tunnel approximately 3,137 feet to the Low Head Pump Station. The only potential for entrainment and/or impingement as a result of operation of the Low Head Pump House is at the Centralized Screen House.
- Currently, there are two operable pumps.
- Approximately 101 MGD flow based on current pump configuration and operation.

Power House Pump House

- After passing through screens in the Common Screen House, non-contact cooling water for the Power House is drawn directly from the deep tunnel. The only potential for entrainment and/or impingement as a result of operation of the Power House Pump House is at the Centralized Screen House.
- Currently, there are ten operable pumps.
- Approximately 117 MGD flow based on current pump configuration and operation.

No. 3 Pump House

- Lake Michigan is the source water.
- The No. 3 Pump House is located in the northeast portion of the facility and withdrawals water from the same intake canal as the No. 2 Pump House. The No. 3 Pump House was originally designed for eight pumps but only four were installed and provides cooling water to the No. 3 Cold Strip Mill and the 84-inch Hot Strip Mill via four pumps.
- Currently, there are operable pumps but only two are used during normal operations.
- 144 MGD flow based on current pump configuration during normal operations.
- Six vertical traveling screens (single entry/exit) in a common wet well with most utilizing a 1/8" stainless steel woven-mesh screening and the rest with standard 3/8" mesh. Four of the six screens are currently operated.
- 0.30 ft/s velocity under normal operating conditions as calculated by the permittee.
- 1.33 ft/s total rated capacity velocity as calculated by the permittee.
- The traveling screens are designed with individual wash systems used to remove impinged debris and/or fish, which are washed into a common collection trough.



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**Conclusion**

IDEM has determined using best professional judgment (BPJ) that the existing cooling water intake structure at the facility represents Best Technology Available (BTA) to minimize adverse environmental impact in accordance with Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326) based on the following information at this time:

- There has been a substantial reduction in water intake demand;
- Fewer pumps are currently used; and
- An effective increase in screen surface area due to the use of fewer pumps.

IDEM will reassess this BTA determination during the next permit cycle.

**Permit Conditions**

In accordance with the recently promulgated rules at 40 CFR 122 and 40 CFR 125, the owner or operator of a facility that has CWIS with a Design Intake Flow (DIF) or Actual Intake Flow (AIF) > 125 MGD must submit the information required at 40 CFR 122.21(r)(2) through (13), including all of the associated supporting documentation and/or studies, no later than July 14, 2018, unless an alternate schedule for submission is approved or a waiver of a particular requirement is requested and granted under 40 CFR 125.95. In addition, the permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

2. At all times properly operate and maintain the intake equipment.

3. Inform IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.

4. There shall be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.

5. All required reports shall be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch.

6. Submit the information required to be considered by the Director per 40 CFR 125.98 to assist IDEM with the fact sheet or statement of basis for entrainment BTA, no later than the next permit renewal application..

### 6.4.2 Streamlined Mercury Variance (SMV)

In accordance with 327 IAC 5-3.5, the permittee applied for and was granted a Streamlined Mercury Variance (SMV) from the water quality based effluent limitations for

mercury in the permit modification effective September 1, 2016. The SMV applies to the discharge of mercury from Outfall(s) 009 and 010.

The permittee submitted a SMV renewal application as part of the NPDES permit renewal application. As required by rule, the SMV renewal application included bi-monthly monitoring data for Total Mercury and the Pollutant Minimization Program Plan (PMPP). The PMPP functions to identify and minimize the discharge of mercury from Outfall(s) 009 and 010 based on the rule requirements found at 327 IAC 5-3.5.

IDEM conducted a review of all of the mercury data (including duplicates) collected from Outfall(s) 009 and 010 to determine the interim limit. In accordance with 327 IAC 5-3.5-8, the interim effluent limit for Total Mercury will be 1.9 ng/l for Outfall 009 and 1.6 ng/l for Outfall 010.

For the term of the NPDES permit, the permittee is subject to the interim discharge limit developed under the provisions of 327 IAC 5-3.5-8. Each reporting period (i.e., bi-monthly), the permittee shall report both a daily maximum value and an annual average value for mercury. The annual average value is to be calculated as the average of the measured effluent daily values for mercury measured over the most recent (rolling) twelve-month period. Compliance with the interim discharge limit will be achieved when the average of daily values measured over the most recent (rolling) twelve-month period is less than the interim discharge limit.

### 6.4.3 301(g) Variance Request

Section 301(g) of the Clean Water Act and 327 IAC 5-3-4(b)(2) allow for a variance from the applicable BAT requirements through the development of Proposed Modified Effluent Limitations (PMELs) for the non-conventional pollutants of ammonia, chlorine, color, iron, and total phenols (4AAP) provided the following conditions are met:

1. The proposed modified effluent limits (PMELs) will meet the categorical BPT effluent limits (Technology Based Effluent Limits) or applicable water quality based effluent limits (WQBEL), whichever are more stringent;

2. The PMELs will not result in any additional requirements on other point or non-point sources;

3. The PMELs will not interfere with the attainment or maintenance of water quality which will protect public water supplies, aquatic life, and recreational activities; and,

4. The PMELs will not result in the discharge of pollutants in quantities which may reasonably be anticipated to pose an unacceptable risk to human health or the environment because of bioaccumulation, persistency in the environment, acute toxicity, chronic toxicity (including carcinogenicity, mutagenicity, or teratogenicity, or synergistic properties).

Previously, this agency granted Section 301(g) variances for ammonia (as N) and phenols (4AAP) in the ironmaking and sintering process wastewaters. This request was

identified as approved by U.S.EPA to this agency in a letter dated March 3, 1986. Therefore, the previous permit included net limits for ammonia (as N) and phenols (4AAP) at Outfalls 009, 010, and 011 since such wastewaters were discharged through each of those outfalls. The permittee was required to sample intake water at pumping stations 1 and 2 for ammonia and phenols at the same frequency as the discharge waters. Net values were calculated by subtracting the measured intake values from the measured effluent values.

In a letter dated August 24, 2007, the permittee identified the reconfiguration of wastestreams and, more specifically, the redirection of blast furnace/sinter plant wastestreams. The permittee stated that the Section 301(g) variance limits for ammonia and phenols should apply at the blast furnace/sinter plant internal outfall (proposed Internal Outfall 510 at the time) as gross limitations. This request was updated in a June 15, 2009, letter identifying PMELs for ammonia of 400 lbs/day monthly average and 1,000 lbs/day daily maximum and 10 lbs/day daily maximum for phenols at the internal outfall.

Furthermore, in a letter dated December 20, 2010, the internal outfall was changed from Internal Outfall 510 to 509. Internal Outfall 509 is now the NPDES permit compliance monitoring station for process water discharges from the blast furnace and sinter plant. Outfall 509 discharges to Outfall 009 to the Indiana Harbor Ship Canal. After the new treatment plant for the blast furnaces and sinter plant was constructed and placed into operation, the ammonia limits initially requested in 2009 were not sufficient so an updated request was submitted dated May 10, 2011 requesting the entire 301 (g) limits as gross limits at internal outfall 509.

During the previous permit renewal, IDEM reviewed the submittal from ArcelorMittal and, as a result of that review, determined that the net limit requirements for the three outfalls shall remain in the permit. The variance assigned specific net limits for ammonia (as N) and Phenols (4AAP) as before but since the sinter plant and blast furnace systems were removed from the Outfall 011 discharge and redirected to Outfall 009 the ammonia and phenol allocations have been rearranged but the total net limits will still apply across the three outfalls as before.

The categorical effluent limitation guidelines for ammonia (as N) and phenols (4AAP) which form the basis for the BPT and BAT effluent limits for discharges from Internal Outfall 509 are found at 40 CFR 420.32(a) and 420.33(a), respectively.

ArcelorMittal Indiana Harbor West has requested, with this renewal application, for the PMELs for ammonia (as N) and phenols (4AAP) based on the 301(g) variance continuance request dated June 15, 2009, and revised on May 10, 2011 in the context of Indiana's currently applicable water quality standards and IDEM's procedures for conducting wasteload allocations, to be continued in the renewed permit.

The facility is required to submit an updated 301(g) variance request no later than with the renewal application for the next permit cycle if the facility intends to continue the variance.



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### 6.4.4 Polychlorinated Biphenyl (PCB)

There shall be no discharge of polychlorinated biphenyl (PCB) compounds attributable to facility operations such as those historically used in transformer fluids. In order to determine compliance with the PCB discharge prohibition, the permittee shall provide the following PCB data with the next NPDES permit renewal application for at least one sample taken from each final outfall. The corresponding facility water intakes shall be monitored at the same time as the final outfalls.

| Pollutant | Test Method | LOD | LOQ |
|---|---|---|---|
| PCBs* | EPA 608 | 0.1 ug/L | 0.3 ug/L |

*PCB 1242, 1254, 1221, 1232, 1248, 1260, 1016

## 6.5 Spill Response and Reporting Requirement

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.(d), Part II.B.3.(c), and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedance to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

## 6.6 Post Public Notice Addendum

The draft NPDES permit for the facility was made available for public comment from April 12, 2017, through May 29, 2017, as part of Public Notice No. 2017-4C-RD. During this comment period, a comment letter dated May 26, 2017, from Kevin Doyle, Environmental Manager, was received. The comments submitted by Mr. Doyle is included as Attachment B of this Fact Sheet. This Office's corresponding responses are summarized in Attachment C. Any changes to the permit and/or fact sheet are so noted in Attachment C.



ED_002857_00014075-00121

# Attachment A
# Water Quality Assessment

## Use Classifications

The Indiana Harbor Canal originates at the confluence of the East and West Branches of the Grand Calumet River. It runs north for two miles where it is joined by the Lake George Canal. The Lake George Canal originates two miles to the west of its confluence with the Indiana Harbor Canal. The Indiana Harbor Canal then runs two miles northeast to the Indiana Harbor. The Indiana Harbor runs one mile to the north before emptying into the open waters of Lake Michigan. The "open waters of Lake Michigan" is defined at 327 IAC 2-1.3-2(30) as the following:

"...(A) The surface waters within Lake Michigan lakeward from a line drawn across the mouth of tributaries to the lake, including all surface waters enclosed by constructed breakwaters.
(B) For the Indiana Harbor Ship Canal, the boundary of the open waters of Lake Michigan is delineated by a line drawn across the mouth of the harbor from the East Breakwater Light (1995 United States Coast Guard Light List No. 19675) to the northernmost point of the shore line along the west side of the harbor."

Based on this definition, IDEM considers the shoreline on the west side of the breakwall, which creates a channel for the ArcelorMittal West Nos. 2 and 3 water intakes, as the western boundary of the Indiana Harbor Ship Canal. The breakwall creates a barrier between the channel and the Indiana Harbor during critical flow conditions, so the channel will not be considered part of the Indiana Harbor for purposes of conducting wasteload allocations. Instead, it will be treated as a tributary within the Lake Michigan drainage basin.

ArcelorMittal has outfalls that discharge to the Indiana Harbor Canal downstream of the Lake George Canal, outfalls that discharge to the Indiana Harbor and an outfall that discharges to the channel behind the breakwall on the west side of the Indiana Harbor. As noted above, this channel was considered a tributary within the Lake Michigan drainage basin. The Indiana Harbor Canal, the Indiana Harbor and the channel for the ArcelorMittal West Nos. 2 and 3 water intakes are designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. ArcelorMittal West has a water intake in the Indiana Harbor so the Indiana Harbor is designated as an industrial water supply. The Indiana portion of the open waters of Lake Michigan is designated for full-body contact recreation; shall be capable of supporting a well-balanced, warm water aquatic community; is designated as salmonid waters and shall be capable of supporting a salmonid fishery; is designated as a public water supply; and, is designated as an industrial water supply. The Indiana portion of the open waters of Lake Michigan is also classified as an outstanding state resource water. These waterbodies are identified as waters of the state within the Great Lakes system. As such, they are subject to the water quality standards and implementation procedures specific to Great Lakes system dischargers as found in 327 IAC 2-1.5, 327 IAC 5-1.5, and 327 IAC 5-2.

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop Total Maximum Daily Loads (TMDLs) for these waters in order to achieve compliance with the water quality standards. Indiana's 2014 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and Total Maximum Daily Load Development for the 2014 Cycle. As of the 2014 303(d) List of Impaired Waters, the following impairments were listed for waters to which the permittee discharges:

**Table 1**

| Assessment Unit | Waterbody | Impairments | ArcelorMittal West Outfalls |
|---|---|---|---|
| INC0163_T1001 | Indiana Harbor Canal | Impaired Biotic Communities, Oil and Grease, *E. coli* and PCBs in Fish Tissue | 002, 009 and 010 |
| INC0163G_G1078 | Indiana Harbor | Free Cyanide, Mercury in Fish Tissue and PCBs in Fish Tissue | 011 and 012 |
| INM00G1000_00 | Lake Michigan | Mercury in Fish Tissue and PCBs in Fish Tissue | None |

**Water Quality-based Effluent Limitations**

The water quality-based effluent limitations included in the 2011 permit and documented in the Fact Sheet were developed as part of a wasteload allocation analysis for the Indiana Harbor Canal presented in the report "Supplemental Information for the Wasteload Allocation Analysis for the ArcelorMittal Indiana Harbor 2011 Draft Permits" dated August 19, 2011. The wasteload allocation included a multi-discharger model that was limited to the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed. Pollutants selected for the multi-discharger model were based on water quality concerns and the application of technology-based effluent limitations at multiple outfalls. For ArcelorMittal West, water quality-based effluent limitations (WQBELs) for ammonia-N at Outfall 009, for lead and zinc at Outfalls 009 and 011 and for total residual chlorine at Outfalls 002, 009, 010 and 011 were developed as part of the multi-discharger model. The 2011 wasteload allocation (WLA) also included WQBELs for specific pollutants calculated on an individual outfall basis.

The 2011 WLA was developed using Indiana water quality regulations for discharges to waters within the Great Lakes system that include water quality criteria and methodologies for developing water quality criteria (327 IAC 2-1.5), procedures for calculating WLAs (327 IAC 5-2-11.4), making reasonable potential to exceed determinations (5-2-11.5) and developing WQBELs (5-2-11.6). These regulations are applicable to individual pollutants and to whole effluent toxicity (WET). These regulations are still applicable and were used in the current WLA analysis for the

Indiana Harbor Canal presented in the report "Supplemental Information for the Wasteload Allocation Analysis for the ArcelorMittal Indiana Harbor 2017 Permits" dated June 23, 2017. The application of WET requirements to ArcelorMittal is included in a later section.

The current subwatershed model for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor included the ArcelorMittal West facility which has three active outfalls to the Indiana Harbor Canal, one active outfall to the Indiana Harbor, and one water intake in the Indiana Harbor near the mouth of the Indiana Harbor Canal. The other major dischargers included in the subwatershed model are as follows in relation to the ArcelorMittal West facility: ArcelorMittal Indiana Harbor – Central Wastewater Treatment Plant (IN0063711) has one active outfall upstream to the Indiana Harbor Canal. This outfall is the first ArcelorMittal outfall in the subwatershed. ArcelorMittal USA – Indiana Harbor East (IN0000094) has three active outfalls to the Indiana Harbor. The discharges from these two facilities were taken into consideration in determining the need for and establishing WQBELs for the discharges from the ArcelorMittal West outfalls.

A review of the 2014 303(d) list shows that there is only one pollutant on the list that has the potential to impact wasteload allocation analyses conducted for the renewal of NPDES permits for dischargers in the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed. The Indiana Harbor was first listed for free cyanide on the 2010 303(d) list. The listing was based on free cyanide data collected during the years 2000 and 2001 at IDEM fixed station IHC-0 in the Indiana Harbor. This station is located just upstream of ArcelorMittal West Outfall 011 and, due to the potential for reverse flows in the Indiana Harbor, could be impacted by the outfall. It is also located downstream of ArcelorMittal East Outfalls 011, 014 and 018. The aquatic life criteria for cyanide were changed from total cyanide to free cyanide in the 1997 Great Lakes rulemaking. It is IDEM current practice to monitor for total cyanide at fixed stations and analyze samples for free cyanide only when total cyanide data show a reportable concentration ($\geq$ 5 ug/l). After 2001, data collected at fixed station IHC-0 no longer showed any reportable values for total cyanide so free cyanide data have not been collected. ArcelorMittal West has also installed additional treatment and redirected cyanide containing process wastewater away from Outfall 011.

The Indiana Harbor Canal has not been included on the 303(d) list for free cyanide due to the two IDEM fixed stations in the Indiana Harbor Canal (located upstream of fixed station IHC-0 at Columbus Avenue (IHC-3S) and Dickey Road (IHC-2)) not showing impairment for free cyanide. There has not been a value for total cyanide above 5 ug/l reported at IHC-3S since February 2007 and at IHC-2 since January 2005. Prior to the 2011 permit renewal, total cyanide had been reported at many of the ArcelorMittal outfalls due to technology-based limits for this parameter, but little data for free cyanide was available. Therefore, in the 2011 permit renewal, monitoring was required for free cyanide at ArcelorMittal outfalls that have process wastewater for use in an assessment of reasonable potential.

A TMDL is not currently planned for the subwatershed, and, based on current IDEM monitoring data, may not be required. Therefore, as was done in the 2011 WLA, the procedures for calculating WLAs under 5-2-11.4 were used to develop preliminary WLAs and WLAs in the absence of a TMDL. Wasteload allocations in the absence of TMDLs are developed to establish water quality-based effluent limitations under 5-2-11.6 and preliminary wasteload allocations are developed to make reasonable potential determinations under 5-2-11.5. The reasonable potential procedures under 5-2-11.5 include provisions for making reasonable potential determinations using best professional judgment (5-2-11.5(a)) and using a statistical procedure (5-2-11.5(b)). The statistical procedure is a screening process in which a projected effluent quality (PEQ) based on effluent data is calculated and compared to a preliminary effluent limitation (PEL) based on the preliminary wasteload allocation. Both the best professional judgment and statistical procedures were used to

establish the need for WQBELs to protect the designated uses of the Indiana Harbor Canal, Indiana Harbor, and Lake Michigan.

To develop WLAs and conduct reasonable potential to exceed analyses, IDEM utilized the following effluent data collected and submitted by ArcelorMittal for the West facility outfalls included in the subwatershed model: data collected during the period December 2011 through June 2016 in accordance with the 2011 permit renewal and reported on monthly monitoring reports (MMRs); data for fluoride and cyanide collected from February 2015 through January 2016 as part of a special reporting requirement included in the 2011 permit renewal; data for ammonia-N collected in 1999 as part of the Grand Calumet River TMDL study and data for ammonia-N collected for the 2009 permit renewal application update; and, additional data collected for the 2016 permit renewal application. To develop WLAs, IDEM utilized the following sources of water quality data for the Indiana Harbor Canal and Indiana Harbor: IDEM fixed water quality monitoring station IHC-3S at Columbus Drive (Indiana Harbor Canal upstream of Lake George Canal and all ArcelorMittal outfalls); IDEM fixed station IHC-2 at Dickey Road (Indiana Harbor Canal); and, IDEM fixed station IHC-0 at the mouth of the Indiana Harbor. To develop WLAs, IDEM utilized the following sources of data for Lake Michigan: IDEM fixed station LM-H at the public water supply intake for the City of Hammond and IDEM fixed station LM-DSP at Dunes State Park. After a review of effluent and in-stream data, it was decided to conduct a multi-discharger WLA for ammonia-N, free cyanide, fluoride, lead, zinc and total residual chlorine. Other pollutants of concern, including mercury, were considered on an outfall by outfall basis.

In the 2011 multi-discharger model, the Indiana Harbor Canal was divided into sixteen complete mix segments and the Indiana Harbor into five complete mix segments. The Lake George Canal was incorporated as an input to the Indiana Harbor Canal. The intrusion of lake water was accounted for in the model by adding a portion of the total lake intrusion flow to the surface layer of each of nine affected segments in the Indiana Harbor and Indiana Harbor Canal. A total lake intrusion flow of 138 cfs was used based on a measurement made by the USGS in October 2002 during a normal lake level condition. The procedures in 5-2-11.4 require the more stringent of the FAV or the acute WLA calculated using up to a one-to-one dilution to be applied to individual outfalls. They also limit the dilution available for each outfall (the mixing zone) to twenty-five percent (25%) of the stream design flow. Because of the potential for overlapping mixing zones within a segment, the combined discharges in a segment were also limited collectively to twenty-five percent (25%) of the stream design flow. This was done in accordance with 5-2-11.4(b)(3)(D) which requires the combined effect of overlapping mixing zones to be evaluated to ensure that applicable criteria and values are met in the area where the mixing zones overlap.

Based on the reasonable potential statistical procedure at 5-2-11.5(b)(1)(iii) and (iv), the procedures under 5-2-11.4(c) are used as the basis for determining preliminary WLAs and the preliminary WLAs are then used to develop monthly and daily PELs in accordance with the procedure for converting WLAs into WQBELs under 5-2-11.6. Three critical inputs to the procedure under 5-2-11.4(c) include the background concentration, the effluent flow and the stream flow. The background concentration is determined under 5-2-11.4(a)(8). Under this rule, background concentrations can be determined using actual in-stream data or in-stream concentrations estimated using actual or projected pollutant loading data. In the multi-discharger WLA, in-stream data were used to establish the background concentration for the first segment of the model and then either actual or projected pollutant loading data were used. For pollutants not included in the multi-discharger WLA, in-stream data were used.

In the 2011 multi-discharger model, the flow assigned to each outfall was the long-term average flow using data from January 2006 through December 2007. This period was considered by ArcelorMittal to be the most representative of full operating conditions. Based on a review of flow

data for the period January 2013 thru December 2015, it was determined that the flows used in the 2011 permit renewal are not representative of conditions expected during the term of the renewal permit. The termination of production at ArcelorMittal USA – Indiana Harbor Long Carbon (IN0063355) has resulted in the elimination of one significant discharge to the Indiana Harbor Canal. There has also been a significant reduction in the discharge flow from ArcelorMittal East Outfall 011. The flow assigned to the ArcelorMittal Central WWTP outfall and to ArcelorMittal West Outfalls 002 and 011 was the long-term average flow calculated using data from the period January 2013 through December 2014. This period represents production prior to the idling in 2015 of operations contributing flow to ArcelorMittal Central WWTP and ArcelorMittal West. Based on improved flow monitoring, the period September 2016 through May 2017 was used for ArcelorMittal West Outfalls 009 and 010. The flow assigned to each outfall for ArcelorMittal East was the long-term average flow calculated using data from the period January 2014 through December 2015. This period represents production after the permanent shutdown of the Nos. 5 and 6 blast furnaces in June 2013.

The stream design flow used to develop wasteload allocations is determined under 5-2-11.4(b)(3). For the pollutants considered in this analysis, the aquatic life criteria are limiting and the stream design flow for chronic aquatic life criteria is the Q7,10. As was done in the 2011 WLA, since the Q7,10 is the appropriate flow for the water quality criteria being considered, the Q7,10 was used as the upstream flow for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor WLA. Therefore, the stream design flow was set equal to the Q7,10 flow in the first segment of the multi-discharger model and then the long-term average flow of each discharger was added to become the stream design flow for downstream dischargers. The lake intrusion flow was added to the stream design flow at the end of each applicable segment. The Q7,10 was calculated using data from USGS gauging station 04092750 which is located in the Indiana Harbor Canal at Canal Street. The data used in the calculation consisted of continuous daily mean flow data approved by the USGS for the period 10-1-1994 through 3-31-2012. The Q7,10 based on the climatic year (April 1 through March 31) is 358 cfs.

At each applicable outfall, PELs were calculated for each pollutant of concern using an outfall specific spreadsheet that calculates PELs using the procedures under 5-2-11.4(c) to calculate WLAs and the procedures under 5-2-11.6 to convert WLAs into PELs. The spreadsheet considers all water quality criteria (acute and chronic aquatic life, human health and wildlife) and associated stream design flows and mixing zones. The stream design flow for each water quality criterion was set equal to the same value in the outfall specific spreadsheet. This value was the Q7,10 flow plus the accumulation of long-term average effluent flow and any lake intrusion flow, minus any intake flow. For mercury, which is a bioaccumulative chemical of concern (BCC), a mixing zone was not allowed in the development of PELs for any outfall in accordance with 5-2-11.4(b)(1). For those pollutants included in a multi-discharger WLA, the multi-discharger model was used to ensure that the most stringent water quality criterion is met at the edge of the mixing zone for each segment. This was the 4-day average chronic criterion. The multi-discharger model was also used to ensure that Lake Michigan criteria are met at the end of the last segment in the Indiana Harbor. The preliminary WLA was included as an input in the multi-discharger model and PELs were calculated from the preliminary WLA.

In the multi-discharger model, preliminary WLAs for each outfall were established, if possible, so that the monthly and daily PEQs did not exceed the PELs calculated from the preliminary WLAs. If TBELs were included for the parameter at a final outfall or an internal outfall, then the preliminary WLA was increased to the extent possible to allow the mass-based PELs to exceed the TBELs. The preliminary WLAs were adjusted as necessary so that the calculated PELs did not exceed the PELs calculated using the outfall specific spreadsheets and so that the water quality criterion was not exceeded at the edge of the mixing zone for each segment as determined using the

multi-discharger model. For some outfalls, the discharge of one or more pollutants for which a multi-discharger WLA was conducted was not considered significant, so a preliminary WLA was established based on the reported effluent concentration, or if sufficient data were available, reported effluent loading data, but PELs were not calculated as allowed under 5-2-11.5(b)(1).

After assigning a preliminary WLA to each outfall in a segment and entering the WLA into the multi-discharger model, the model calculates the PELs for each outfall, the concentration at the edge of the mixing zone for the segment and the concentration at the end of each segment after complete mixing. The concentration after complete mixing then becomes the background concentration for the next segment. To calculate PELs using the outfall specific spreadsheets, the background concentration for each outfall was calculated assuming complete mixing between outfalls. This was done by entering the WLAs for each outfall into a separate spreadsheet that calculated the background concentration upstream of each outfall. By conducting a multi-discharger WLA in this manner, the background concentration for each outfall was based on the accumulated WLAs for the prior outfalls. Since the WLAs were based in some cases on projected effluent quality, the background concentrations were based on projected loading data. This provided a conservative means of determining the cumulative impact of the outfalls. For those pollutants not included in a multi-discharger WLA, the background concentration for each outfall was based on in-stream data.

The results of the reasonable potential statistical procedure are included in Tables 2 thru 5. The results show that the discharges from ArcelorMittal West Outfalls 009, 010 and 011 do not have a reasonable potential to exceed a water quality criterion for any of the pollutants considered in the reasonable potential analysis.

In addition to establishing WQBELs based on the reasonable potential statistical procedure, IDEM is also required to establish WQBELs under 5-2-11.5(a) "If the commissioner determines that a pollutant or pollutant parameter (either conventional, nonconventional, a toxic substance, or whole effluent toxicity (WET)) is or may be discharged into the Great Lakes system at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable narrative criterion or numeric water quality criterion or value under 327 IAC 2-1.5". Chlorine is added to the intake water for zebra and quagga mussel control at concentrations exceeding water quality criteria. Outfalls 002, 009, 010 and 011 receive noncontact cooling water. Therefore, chlorine may be discharged from these outfalls at a level that will cause an excursion above the numeric water quality criterion for total residual chlorine under 2-1.5 and WQBELs for total residual chlorine are required at Outfalls 002, 009, 010 and 011.

For each pollutant receiving TBELs at an internal outfall, and for which water quality criteria or values exist or can be developed, concentration and corresponding mass-based WQBELs were calculated at the final outfall. The WQBELs were set equal to the applicable PELs from the multi-discharger model or the outfall specific spreadsheet. This was done for ArcelorMittal West Outfall 009 (ammonia-N, lead and zinc at Internal Outfall 509 and a 301(g) variance for ammonia-N at the final outfall), ArcelorMittal West Outfall 010 (301(g) variance for ammonia-N), ArcelorMittal West Outfall 011 (lead and zinc at Internal Outfalls 701 and 702 and a 301(g) variance for ammonia-N at the final outfall). The mass-based WQBELs at the final outfall were compared to the mass-based TBELs. Since the facility is authorized to discharge up to the mass-based TBELs, if the mass-based TBELs exceed the mass-based WQBELs at the final outfall, the pollutant may be discharged at a level that will cause an excursion above a numeric water quality criterion or value under 2-1.5 and WQBELs are required for the pollutant at the final outfall. This was not the case for any pollutant at Outfalls 009, 010 and 011.

Once a determination is made using the reasonable potential provisions under 5-2-11.5 that WQBELs must be included in the permit, the WQBELs are calculated in accordance with 5-2-11.5(d). Under this provision, in the absence of an EPA-approved TMDL, WLAs are calculated for the protection of acute and chronic aquatic life, wildlife, and human health in accordance with the WLA provisions under 5-2-11.4. The WLAs are then converted into WQBELs in accordance with the WQBEL provisions under 5-2-11.6. The WQBELs are included in Table 7 and were set equal to the PELs calculated for each pollutant.

In addition to the outfalls on the Indiana Harbor Canal and Indiana Harbor, ArcelorMittal West Outfall 012 discharges to the forebay of the No. 3 water intake. The No. 3 intake is located on the channel that runs along the west side of the Indiana Harbor breakwall from Lake Michigan, past the No. 3 intake, and to the Indiana Harbor West No. 2 water intake. As noted above, IDEM is treating the channel as a tributary within the Lake Michigan drainage basin. The discharge from Outfall 012 consists of flow from the North Lagoon. In the 2011 permit, the North Lagoon was permitted to receive treated wastewater from Internal Outfalls 111 (84-inch hot strip mill) and 211 (No. 3 cold mill and hot strip mill oily waste sumps), noncontact cooling water and storm water. For this permit renewal, only stormwater and groundwater will be included as sources. Therefore, a wasteload allocation was not conducted for Outfall 012.

**Whole Effluent Toxicity Testing Requirements**

The 1997 Indiana Great Lakes regulations included narrative criteria with numeric interpretations for acute (2-1.5-8(b)(1)(E)(ii)) and chronic (2-1.5-8(b)(2)(A)(iv)) whole effluent toxicity (WET) and a procedure for conducting reasonable potential for WET (5-2-11.5(c)(1)). U.S. EPA did not approve the reasonable potential procedure for WET so Indiana is now required by 40 CFR Part 132.6(c) to use the reasonable potential procedure in Paragraphs C.1 and D of Procedure 6 in Appendix F of 40 CFR Part 132. IDEM used this procedure in conducting the reasonable potential analysis for WET except that the equation was rearranged so that it is similar to the equation that IDEM uses for other pollutants and pollutant parameters.

The renewal permit issued October 26, 2011 for ArcelorMittal West required monthly chronic toxicity testing for three months at Outfalls 009 and 011 for *Ceriodaphnia dubia* and Fathead Minnow. Thereafter, testing was required quarterly for the most sensitive species. The permit modification issued November 26, 2014 reduced the testing frequency to once per year and only required testing for *Ceriodaphnia dubia*. The representative dataset for the reasonable potential analysis was considered to begin with the first test under the 2011 permit conducted in February 2012. The results of the reasonable potential analysis are shown in Table 6. The results show that the discharges from Outfalls 009 and 011 do not have a reasonable potential to exceed the numeric interpretation of the narrative criterion for acute or chronic WET.

The permittee will be required to conduct whole effluent toxicity testing of its effluent discharge from Outfalls 009 and 011 using *Ceriodaphnia dubia*. The terms and conditions of the WET testing are contained in Part I.F. of the NPDES permit. Part I.F.1.c.(2) of the permit states that chemical analysis must accompany each effluent sample taken for bioassay test. The analysis detailed under Part I.A should be conducted for each effluent sample. The effluent should be sampled using the sample type requirements specified in Part I.A. Questions regarding the WET testing procedures should be addressed to the Office of Water Quality, NPDES Permits Branch.

Chronic toxicity testing is required at Outfalls 009 and 011. Acute toxicity is to be derived from chronic toxicity tests and toxicity is to be reported in terms of acute and chronic toxic units and compared to calculated TRE triggers. The TRE triggers are set equal to the acute and chronic

WLAs for WET in accordance with 327 IAC 5-2-11.6(d). If either an acute or chronic TRE trigger is exceeded, another chronic WET test must be conducted within two weeks. If the results of any two consecutive tests exceed the applicable TRE trigger, ArcelorMittal must conduct a TRE. The TRE triggers are shown in Table 7.

**Thermal Requirements**

The Indiana Harbor Canal and Indiana Harbor shall be capable of supporting a well-balanced, warm water aquatic community. The water quality criteria for temperature applicable to these waterbodies are included in 327 IAC 2-1.5-8(c). Indiana regulations state that the temperature criteria apply outside a mixing zone, but the allowable mixing zone is not established in the rules. IDEM current practice is to allow fifty percent (50%) of the stream flow for mixing to meet temperature criteria. The implementation procedures under 327 IAC 5-2-11.4 for developing wasteload allocations for point source discharges address temperature under 5-2-11.4(d)(3). This provision states that temperature shall be addressed using a model, approved by the commissioner, that ensures compliance with the water quality criteria for temperature.

There is also no specific procedure in the rules for determining whether a discharger is required to have water quality-based effluent limits (WQBELs) for temperature. Therefore, the general provision for making reasonable potential determinations in 5-2-11.5(a) is applicable. This provision establishes that if the commissioner determines that a pollutant or pollutant parameter is or may be discharged into the Great Lakes system at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable narrative or numeric water quality criterion under 2-1.5, the commissioner shall incorporate WQBELs in an NPDES permit that will ensure compliance with the criterion. In making this determination, the commissioner shall exercise best professional judgment, taking into account the source and nature of the discharge, existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and, where appropriate, the dilution of the effluent in the receiving water. The commissioner shall use any valid, relevant, representative information pertaining to the discharge of the pollutant.

The multi-discharger model for the Indiana Harbor Canal/Lake George Canal/Indiana Harbor subwatershed discussed above included four active outfalls discharging to the Indiana Harbor Canal and four active outfalls discharging to the Indiana Harbor that contain a thermal component such as noncontact cooling water or boiler blowdown as a source of wastewater. ArcelorMittal West Outfall 002 has a flow of 12.2 mgd consisting of noncontact cooling water; Outfall 009 has a flow of 52.5 mgd with Internal Outfall 509 having a flow of 0.8 mgd and the remaining consisting mostly of noncontact cooling water; Outfall 010 has a flow of 47.4 mgd consisting mostly of noncontact cooling water; and, Outfall 011 has a flow of 22.1 mgd with Internal Outfalls 701 and 702 having combined intermittent flows of less than 0.5 mgd and the remaining consisting mostly of noncontact cooling water. The ArcelorMittal West 2011 permit includes temperature monitoring for Outfalls 002, 009, 010 and 011 on the intake and outfall at a frequency of 2 times per week. The main source of cooling water for ArcelorMittal West Outfall 002 during the term of the permit was the No. 2 intake at the end of the Lake Michigan intake channel. The main source of cooling water for Outfalls 009, 010 and 011 was the No. 1 intake at the mouth of the Indiana Harbor Canal. For the term of the renewal permit, the No. 2 intake is expected to be the main source for all outfalls. The data for Outfall 002 follow a seasonal pattern with a maximum recorded temperature of 98.5 °F in August 2012. The data for Outfall 009 follow a seasonal pattern, but with relatively higher temperatures than the other ArcelorMittal West outfalls, with a maximum recorded temperature of 105.6 °F in July 2013. The data for Outfall 010 follow a seasonal pattern with a

maximum recorded temperature of 99.2 °F in July 2013. The data for Outfall 011 follow a seasonal pattern with a maximum recorded temperature of 93.6 °F in July 2012.

The multi-discharger model accounted for the intrusion of lake water into the Indiana Harbor and Indiana Harbor Canal. The intrusion of lake water produces thermal stratification that ends at the railroad bridge about 0.7 miles upstream of the mouth of the Indiana Harbor Canal. The outfalls that discharge upstream of the railroad bridge are ArcelorMittal Central WWTP Outfall 001 and ArcelorMittal West Outfall 002 on the west side of the canal. ArcelorMittal West Outfalls 009 and 010 are the first two discharges downstream of the railroad bridge and are also on the west side of the canal. A review of historical instream temperature data at IDEM fixed stations on the Indiana Harbor Canal and Indiana Harbor from January 1990 through December 2015 and IDEM fixed station LM-DSP on Lake Michigan at Dunes State Park from January 1997 through December 2015 shows that the maximum temperature values were recorded in July 1999 and July 2012. The average stream flow during the July 1999 and July 2012 temperature monitoring as recorded at USGS gaging station 04092750 in the Indiana Harbor Canal at Canal Street was 485 cfs in July 1999 and 521 cfs in July 2012 which are greater than the Q7,10 of 358 cfs, but less than the harmonic mean flow of 548 cfs.

In addition to the instream sampling, a multi-discharger model was used to assist in the reasonable potential analysis. The multi-discharger model for toxics discussed above was modified to account for temperature. The mixing zone was set at fifty percent (50%) of the stream flow to be consistent with current IDEM practice for mixing zones for temperature. The model does not account for heat dissipation so it represents a conservative, dilution only analysis. A Q7,10 flow of 358 cfs, long-term average effluent flows and background temperatures from fixed station IHC-3S were used in the multi-discharger thermal model as were used in the multi-discharger toxics model. The effluent temperature input to the model was set equal to the maximum temperature reported for the month during the period of representative data collection. For the ArcelorMittal Central WWTP outfall and ArcelorMittal West outfalls, this period was January 2012 through December 2015 since temperature monitoring was reinstated in their 2011 permits. For ArcelorMittal East Outfall 011, the representative period was also January 2012 through December 2015. For ArcelorMittal East Outfall 014, the period was January 1998 through December 2015 and for ArcelorMittal East Outfall 018 the period was June 1999 through December 2015 if it was considered representative data. The critical peak temperature months of June through September were included as one period since the same maximum criterion of 90°F applies each month.

The results of the conservative, dilution only modeling show that the discharges from ArcelorMittal West Outfalls 002, 009, 010 and 011 do not have a reasonable potential to cause or contribute to an excursion of the water quality criterion for temperature in the Indiana Harbor Canal or Indiana Harbor from January through December. Based on the results of the instream sampling and multi-discharger thermal model, the discharges from ArcelorMittal West Outfalls 002, 009, 010 and 011 do not have a reasonable potential to exceed a water quality criterion for temperature. Under 5-2-11.5(e), the commissioner may require monitoring for a pollutant of concern even if it is determined that a WQBEL is not required based on a reasonable potential determination. Monitoring for temperature was continued in the renewal permit.

# Attachment B

# ArcelorMittal Comment Letter and Appendices

**ArcelorMittal Comments on Draft Fact Sheet and NPDES Permit ArcelorMittal**
**Indiana Harbor LLC**
**Indiana Harbor West**
**NPDES Permit Number IN0000205**
**Public Notice No. 2017-4C-RD, April 12, 2017**

1. IH West Discharge Flows – Outfalls 009, 010 and 011
   Fact Sheet (pages 6, 7, 8)

ArcelorMittal recently conducted dye dilution studies at Indiana Harbor West (IH West) Outfalls 009 and 010 to develop dry weather discharge flows that are representative of current IH West operating conditions. A report of those studies has been provided under separate cover with ArcelorMittal comments on IDEM's November 2016 wasteload allocation report (see Appendix B-2 of those comments). In addition, the average flow for Outfall 011 for the period August 2014 to February 2017 was 23.9 mgd, which is representative of current operating conditions.

Please make the following changes for Outfall 009, 010 and 011 average discharge flows, and these flows should be used to update the November 2016 IDEM wasteload allocation report for the ArcelorMittal facilities that discharge to the Indiana Harbor Ship Canal and Indiana Harbor.

| IH West Outfalls | Outfall Flows Reported in the Fact Sheet (mgd) | Outfall Flows Representative of Current IH West Operating Conditions (mgd) |
|---|---|---|
| 009 | 31.8 | 52.6 |
| 010 | 38.1 | 48.1 |
| 011 | 22.1 | 23.9 |

2. Outfalls 701 and 701 – Compliance Determinations with Monthly Average Effluent Limits
   NPDES Permit (pages 18, 19), Fact Sheet (pages 9, 16, 21, 22, 23)

Given the infrequent discharges from Outfalls 701 and 702 as reported in the Fact Sheet, the respective monitoring frequencies should be changed from 2 X Weekly to monitoring once for each discharge event. Furthermore, because ArcelorMittal's chosen method to comply with the Outfall 701 and Outfall 702 technology based effluent limits involves disposal of the treated effluents in the basic oxygen furnace air pollution control system, which results in zero discharge nearly all of the time, compliance determinations with the respective monthly average effluent limits must include averaging of zero discharge days with actual discharges. Appendix A-1 presents Arcelor Mittal comments on this issue that were made for the renewal of the current NPDES permit. Those comments are valid today.

In addition, the NPDES permit regulations at 40 CFR §122.45(e) provide for alternate types of effluent

limits for non-continuous discharges. 40 CFR §122.2 defines *continuous discharge* as follows

*Continuous discharge* means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes or other similar activities.

By this definition, discharges from Outfall 701 and 702 are clearly not *continuous discharges*. As such, the provisions of §122.45(e) pertaining to *non-continuous* discharges can be applied for the renewal IH West NPDES permit for these outfalls.

The generally applicable categorical effluent limitations guidelines from 40 CFR Part 420 for the vacuum degasser (Outfall 701) and continuous caster (Outfall 702) provide for mass monthly average and daily maximum effluent limits. As noted above and in Appendix A-1, we believe compliance with the monthly average effluent limits should be determined as the average of daily discharges during a month determined with days of zero discharge when the respective production facilities are operated counted as zero. This is consistent with ArcelorMittal's installed process water treatment technologies and water management practices to comply with the NPDES permit effluent limits derived from 40 CFR Part 420.

In the alternative, the provisions of 40 CFR §122.45(e) can be used to provide a sensible resolution of this issue. 40 CFR §122.45(e) cites four factors that can be considered for developing NPDES permit effluent limits for *non-continuous discharges*:

(1) Frequency of discharge
(2) Total mass of discharge
(3) Maximum rate of discharge of pollutants during the discharge, and
(4) Prohibition or limitation of specified pollutants by mass, concentration or other appropriate measure

We believe the most straightforward approach is to retain the respective daily maximum effluent limits for Outfalls 701 and 702 such that compliance would be determined against those effluent limits for each day of discharge; and, provide for an alternate approach for monthly average limits consistent with §122.45(e). The monitoring frequency would be set so that effluent samples would be collected on each day of discharge.

For the monthly average limits, we request that compliance be determined against total monthly discharges that are authorized by the categorical effluent limitations guidelines and the corresponding proposed NPDES permit effluent limits set out on pages 18 and 19 of the draft NPDES permit. The permit effluent limit and monitoring tables would look as follows:

Outfall 701 (Vacuum Degasser)

| Pollutant | Monthly Total (lbs/day | Daily Maximum (lbs/day) | Monitoring Frequency | Sample Type |
|---|---|---|---|---|
| Flow | NA | NA | Daily | 24-Hour Total |
| TSS | 636 | 59.4 | Each Discharge Day | 24-Hour Comp. |
| Lead | 7.65 | 0.764 | Each Discharge Day | 24-Hour Comp. |
| Zinc | 11.46 | 1.15 | Each Discharge Day | 24-Hour Comp. |

Outfall 702 (Continuous Caster)

| Pollutant | Monthly Total (lbs/day | Daily Maximum (lbs/day) | Monitoring Frequency | Sample Type |
|---|---|---|---|---|
| Flow | NA | NA | Daily | 24-Hour Total |
| TSS | 1,809 | 169 | Each Discharge Day | 24-Hour Comp. |
| Oil & Grease | 720 | 72.4 | Each Discharge Day | Grab |
| Lead | 21.72 | 2.17 | Each Discharge Day | 24-Hour Comp. |
| Zinc | 32.40 | 3.26 | Each Discharge Day | 24-Hour Comp. |

We believe this approach is consistent with §122.45(e). Notwithstanding, we are open to other sensible approaches that would recognize ArcelorMittal's advanced and unique approach to achieve one of the Clean Water Act national goals of zero discharge of pollutants.

3. Storm Water
NPDES Permit (pages 26 to 44), Fact Sheet (pages 29 to 31)

The sections of the draft NPDES permit regarding storm water (Part I.D Storm Water Monitoring and Non-Numeric Effluent Limits, Part I.E. Storm Water Pollution Prevention Plan are not reasonable for large industrial facilities such as the ArcelorMittal Indiana Harbor steel mills. These sections need to be reworked to make the storm water provisions reasonable and practical for a large steel mill site such as the Indiana Harbor West facility. In many instances, ArcelorMittal believes the highly prescriptive requirements can be replaced with references to other permits (e.g., Title V) and other contingency plans already in effect (e.g., SPCC, RCRA). Appendix A-2 presents our proposed mark-up of these sections. We would like the opportunity to discuss the storm water requirements in a meeting with IDEM.

4. IH West Section 301(g) Variance Request for Ammonia-N and Total Phenols
NPDES Permit (pages 6, 11, 15), Fact Sheet (pages 41, 42)

The Fact Sheet and the draft NPDES permit acknowledge the currently effective Section 301(g) variance that was granted for the current NPDES permit, but do not acknowledge or reflect ArcelorMittal's application of February 28, 2017 to modify the Section 301(g) variance for ammonia-N. We had requested that the February 28, 2017 application be made part of the public notice for the IH West renewal NPDES permit, but that was not done. That application is incorporated into these comments by reference.

We again request that IDEM review the February 28, 2017 Section 301(g) application and process it with the renewal NPDES permit, or process it as a modification of the renewal NPDES permit on a timely basis.

5. Outfall 509 – Monitoring Frequencies
NPDES Permit (page 10), Fact Sheet (page 35)

Considering the compliance record at Outfall 509 during the term of the current NPDES permit, we request the monitoring frequencies for all pollutants at Outfall 509 be set at 1 X Weekly.

6. Section 316(b) Cooling Water Intake Structures
NPDES Permit (pages 69, 70), Fact Sheet (pages 37 to 40)

The Fact Sheet contains a statement that the proposed compliance date for submittal of information required b 40 CFR §122.21(r)(2) through (13) would be July 14, 2018. ArcelorMittal previously requested that the requirement to submit any remaining information regarding impingement and entrainment will be with the next NPDES permit renewal application. That timing is consistent with 40 CFR Part 125.95(a)(2) and with the statement on page 52 of the preliminary draft permit Fact Sheet. IDEM agreed with this request for the Indiana Harbor East NPDES permit. Accordingly, we request similar treatment for the Indiana West NPDES permit.

7. Streamlined Mercury Variances – Outfalls 002, 009, 011
NPDES Permit (pages 3, 15, 71, 72), Fact Sheet (page 41)

ArcelorMittal submitted SMV applications to the Department in April 2016. In a letter dated May 19, 2016, the Department denied SMVs at Outfalls 002 and 011 based on data collected "over the most recent two-year period", which would not have resulted in exceedances of the proposed mercury WQBELs of 1.3 ng/L (monthly average) and 3.2 ng/L (daily maximum).

Data collected as part of the compliance schedule set out in the current NPDES permit and summarized in annual progress reports and in the 2014 Final Plan for Compliance indicate mercury discharges from Outfalls 002, 009, 010, and 011 are most likely due to mercury in water withdrawn through Intake No. 1 and Intake No. 2.

Mercury in the intake waters is beyond the control of ArcelorMittal. Considering the Department's rules do not permit "net" limitations for bioaccumulative chemicals of concern (BCCs), which include mercury, ArcelorMittal believes SMVs should be granted at Outfalls 002 and 011 on the basis that the source of mercury is the intake water. Furthermore, ArcelorMittal believes granting SMVs at Outfalls 002 and 011 is consistent with the Final Water Quality Guidance for the Great Lakes System (FR 15366-15425, March 23, 1995), which includes the following statements:

**Intake Credits:** Great Lakes States and Tribes may consider the presence of intake water pollutants in establishing water quality-based effluent limits (WQBELs) in accordance with Procedure 5 of Appendix F.

**Pass Through:** A permitting authority is allowed to determine that the return of an identified intake water pollutant to the same body of water under specified circumstances does not cause, have the reasonable potential to cause, or contribute to an excursion above water quality standards, and therefore, that a WQBEL would not be required for that pollutant. Under the proposal, this ``pass through'' of intake water pollutants would be allowed if the facility returns the intake water containing the pollutant of concern to the same waterbody; does not contribute additional mass of pollutant; does not increase the concentration of the intake water pollutant; and does not discharge at a time or location, or alter the pollutant in a manner which would cause adverse impacts to occur that would not occur if the pollutant were left in-stream.

In summary, any exceedance of total recoverable mercury at Outfalls 002 or 011 would be the result of ambient mercury levels. The facility has conducted multiple studies to find that there are no appreciable sources of mercury within the facility. Additionally, it has been demonstrated that Lake Michigan intake water may contain significant amounts of mercury. Therefore, it is not logical, nor does it make sense to apply this limit at these outfalls. A more logical approach would be to include a monitor only requirement at the final outfalls and also report intake levels of total recoverable mercury.

For Outfall 009, we request a mercury effluent limit of 3.5 ng/L. Monitoring data collected over the period June 25, 2015 to February 16, 2017 show a maximum mercury discharge concentration of 3.43 ug/L (June 6, 2017).

8. Outfalls 002, 009, 010, 011 – Footnote [2] Water Treatment Additives
NPDES Permit (pages 3, 4, 6, 7, 11, 12, 15, 16)

Please delete the phrase "or increase the discharge concentration of the additive contributing to this Outfall". This is already accounted for in the phrase "including dosage rates beyond the previously approved max dosage rates"

9. Outfalls 002, 009, 010, 011 – Footnotes Regarding LOD/LOQ Reporting

These footnotes provide that daily maximum mass loads for purposes of determining compliance are calculated based on the LOQ of total residual chlorine. This is because the associated WQBELs are below the level of quantitation. ArcelorMittal requests that these footnotes be revised to include:

*a)* Allow averaging of separate grab sample results collected during one day when calculating mass loadings and using values of "0" for the purpose of determining compliance when less than LOQ values are reported. For example: one grab sample at 10:00 results in < 0.06 mg/l of TRC, second grab sample at 17:00 results in < 0.06 mg/l of TRC, because the level of chlorine was consistently below the level of quantitation a mass value of "0" may be assigned, or;

*b)* If one sample results in a TRC < LOD, then a value of 0 may be used for the purposes of determining compliance.

These alternative methods of calculating mass loadings may also serve to minimize possible confusion when reporting electronically via IDEM's netDMR system.

10. Thermal Effluent Requirements
NPDES Permit (page 67), Fact Sheet (pages 22 to 26)

IDEM has determined that thermal discharges from the Indiana Harbor Central Wastewater Treatment Plant facility do not pose a *reasonable potential to exceed* Indiana water quality standards for temperature. Accordingly, we request that paragraph A on page 67 of the NPDES permit be replaced with a simple requirement that intake and outfall measurements for temperature be conducted on the same day by grab sample, with no restriction on the time when temperature measurements can be made.

11. Part I.C.2.f – DMR Due Date
NPDES Permit (page 22)

The first sentence of the last paragraph in this part states: *The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous month which shall be submitted no later than the 28th day of the month following each completed monitoring period.*

The following change is recommended to address reporting of results where the monitoring frequency is different than monthly (e.g., quarterly): *The permittee shall submit federal and state discharge monitoring reports to the Indiana Department of Environmental Management containing results obtained during the previous* ***monitoring period*** *which shall be submitted no later than the 28$^{th}$ day of the month following each completed monitoring period.* [emphasis added].

12. Part I.C.5.c – Reporting Times of Analyses
NPDES Permit (page 25)

We request that the requirement to report times of analyses be removed from the NPDES permit. We believe reporting the dates of analyses are sufficient to document whether sample holding times were met.

13. Part I.C.6 – Reporting Additional Data
NPDES Permit (pages 25, 26)

This section of the permit boilerplate language should be updated to address reporting of additional data under IDEM's netDMR system. Additional data can be reported and indicated in the MMR, but there may be issues with the DMR because required monitoring frequency codes may not agree. Therefore, we request that the sentence "Such increased frequency shall also be indicated". The additional data will be used in the calculations and will also be shown in the MMR.

## Appendix A-1
## ArcelorMittal Indiana Harbor West Comments (2011 NPDES Permit renewal)

### OUTFALLS 701 & 702

In anticipation of the renewal NPDES permit for Indiana Harbor West, ArcelorMittal installed and recently put into operation new and upgraded process water treatment and recycle systems at the Steel Producing Department vacuum degasser and continuous slab caster. The investment cost for these upgrades was approximately $12,000,000. These upgraded systems were installed to achieve the generally applicable technology-based effluent limits for those operations set out at 40 CFR Part 420.
An innovative feature of the design is the potential for zero discharge from one or both of these systems through evaporation of the respective fully treated process water system blowdowns in the gas cleaning systems for the basic oxygen furnaces (BOFs). This innovative approach was directed at achieving one of the overarching goals of the Clean Water Act – zero discharge of pollutants (see 33 U.S.C. §§ 1251(a)(1)).

ArcelorMittal's operating experience since these systems were put into operation in mid-2010 has been that zero discharge has been sustained more or less on a continuous basis. As of this writing, there has only been one day of discharge from the continuous caster system and none from the vacuum degasser system. Each treatment system is equipped with an NPDES permit compliance monitoring station comprising a primary and secondary flow monitoring devices and an automatic 24-hour composite sampler.

The draft NPDES permit establishes new internal NPDES compliance monitoring stations at the discharge from each system: Outfall 701 – vacuum degasser; Outfall 702 – continuous caster. The draft permit specifies twice per week monitoring at Outfalls 701 and 702 (see pp. 15 and 16 of 77). Also, the draft permit contains the following footnote for Outfall 701, and the same footnote for Outfall 702:

> *"[1] The above identified effluent limitations are only applicable when the discharge does not get directed to the BOF and discharges through Internal Outfall 701."*

In effect, this footnote means that for compliance determinations ArcelorMittal can only consider monitoring data for days of discharge through Outfalls 701 or 702. ArcelorMittal could have a discharge on only one day of a month that is less than an applicable daily maximum effluent limit, but greater than the corresponding monthly average limit. This would put ArcelorMittal in jeopardy of being charged with violating the 30-day average effluent limit, when in fact the actual monthly average discharge would have been far less than the respective monthly average effluent limit owing to the days with zero discharge.

To remedy this situation, ArcelorMittal requests that the above footnote be deleted from the final NPDES permit for Outfalls 701 and 702, and that ArcelorMittal be authorized to count scheduled monitoring days with zero discharge as "zero" for compliance determinations for the applicable monthly average effluent limits. This is consistent with the definition of *average monthly discharge limitation* contained in the NPDES permit regulations at 40 CFR §122.2:

**Appendix A-1**
**ArcelorMittal Indiana Harbor West Comments (2011 NPDES Permit renewal)**

**OUTFALLS 701 & 702**

*"Average monthly discharge limitation means the highest allowable average of "daily discharges" measured during a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month."*

For the example cited above, there would be one day of with discharge during a month and no discharges on the other seven days that month when monitoring would be required with a twice per week monitoring frequency. The *sum of the daily discharges* would be the sum of the monitoring result measured on the day of actual discharge and seven zeros. The *number of daily discharges measured during that month* would be eight, the measurement for the actual discharge day and seven measurements of zero.

The federal effluent limitations guidelines at 40 CFR Part 420 are based on the premise that the discharger is free to install any technology of its choosing to comply with NPDES permit effluent limits derived from the effluent limitations guidelines. [1] In this case, ArcelorMittal elected to go beyond minimum national standards and achieve zero discharge. The technologies and operating practices ArcelorMittal employs to achieve zero discharge clearly fall within the construct of the effluent limitations guidelines program and are entirely consistent with one of the principal goals of the Clean Water Act. It is not logical, not correct and not within Indiana and federal NPDES permit regulations to apply the effluent limits for Outfalls 701 and 702 only on days when zero discharge is not realized. The footnotes noted above for Outfalls 701 and 702 must be removed from the NPDES permit and ArcelorMittal must be allowed to consider monitoring days with zero discharge as zero for determining compliance with monthly average effluent limits.

In the alternative, ArcelorMittal could cause a low-volume discharge to occur each monitoring day such that analytical measurements could be made and low mass discharges calculated to demonstrate compliance with effluent limits for each limited pollutant. This would be a total waste of human and financial resources and would be counterproductive to ward any reasonable goal. Under this approach, IDEM will essentially cause discharges of pollutants that would otherwise not occur. ArcelorMittal trusts that IDEM will not force such nonsense.

[1] See Development Document for Effluent limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category, Vol. I (EPA 440/1-82/024, May 1982), p. 87.
*"The limitations neither require the installation of any specific control technology nor the attainment of any specific flow rate or effluent concentration. Various treatment alternatives or water conservation practices can be employed to achieve a particular effluent limitation and standard. The model treatment systems presented in the development document illustrate one means available to achieve the limitations and standards. In most cases, other technologies or operating practices are available to achieve the limitations and standards."*

**Appendix A-2**

**ArcelorMittal Comments on Draft NPDES Permit Conditions for Storm Water**

D. STORM WATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

Within twelve (12) months of the effective date of this permit, the permittee shall implement the non-numeric permit conditions in this Section of the permit for the entire site as it relates to storm water associated with industrial activity regardless which outfall the storm water is discharged from.

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g., SPCC, RCRA) address either directly or indirectly storm water pollution prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term "minimize" means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to minimize pollutant discharges that address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer's specifications. Any deviation from the manufacturer's specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as in accordance with the corrective action requirements in Part I.D.6.
Regulated storm water discharges from the facility include storm water run-on that commingles with storm water discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

a. preventing storm water from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from storm water;

b. use of control measures in combination may be more effective than use of control measures in isolation for minimizing pollutants in storm water discharge;

c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;

d. minimizing impervious areas at the facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid ground water contamination;

e. flow can be attenuated by use of open vegetated swales and natural depressions to reduce in-stream impacts of erosive flow;

f. conservation and/or restoration of riparian buffers will help protect streams from storm water runoff and improve water quality; and

g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits

a. Minimize Exposure

Minimize the exposure of manufacturing, processing, and material storage areas (including loading and unloading, storage, disposal, cleaning, maintenance, and fueling operations) to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

Material storage areas: locate indoors, or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if storm water runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, store materials in appropriate containers, identify and control all on- site sources of dust to minimize storm water contamination from the deposition of dust on areas exposed to precipitation, ~~keep all dumpsters under cover or fit with a lid that must remain closed when not in use,~~ and ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

Minimize the potential for leaks, spills and other releases that may be exposed to storm water and develop plans for effective response to such spills if or when they occur. At a minimum, implement:

i. Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
ii. Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the storm water pollution prevention team;
iv. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State or local requirements

may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available; and

v. A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. ~~Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants.~~ In selecting, designing, installing, and implementing appropriate control measures for erosion and sediment control, check out information from both the State and EPA websites. The following two websites are given as information sources:

http://www.in.gov/idem/storm water/2363.htm and
http://water.epa.gov/polwaste/npdes/storm water/Storm water- Pollution-Prevention-Plans-for-Construction-Activities.cfm

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce storm water runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. Implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if storm water runoff from the piles is not discharged.

h. Employee Training

Train ~~all~~ employees with responsibility for environmental management within each department who work in areas where industrial material or activities are exposed to storm water, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team.

The following personnel must understand the requirements of Part I.D. and Part I.E. of this permit and their specific responsibilities with respect to those requirements: Personnel who are responsible for the design, installation, maintenance, and/or repair of controls (including pollution prevention measures); personnel responsible for the storage and handling of chemicals and materials that could become contaminants in storm water discharges; personnel who are

responsible for conducting and documenting monitoring and inspections related to storm water; and personnel who are responsible for taking and documenting corrective actions as required in Part I.D.6.

Personnel must be trained in at least the following if related to the scope of their job duties (e.g., only personnel responsible for conducting inspections need to understand how to conduct inspections): an overview of what is in the SWPPP; spill response procedures, good housekeeping, maintenance requirements, and material management practices; the location of all controls on the site required by this permit, and how they are to be maintained; the proper procedures to follow with respect to the permit's pollution prevention requirements; and when and how to conduct inspections, record applicable findings, and take corrective actions.

i. Non-Storm water Discharges

Determine if any non-storm water discharges not authorized by an NPDES permit exist. Any non-storm water discharges discovered must either be eliminated or modified into this permit.

The following non-storm water discharges are authorized: ~~and should be documented when they occur in accordance with Part I.E.2.c. of the permit.~~

Discharges from fire-fighting activities; Fire Hydrant flushings; Potable water, including water line flushings; ~~Uncontaminated c~~Condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids; Irrigation drainage; Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling; Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed); Routine external building washdown that does not use detergents; ~~Uncontaminated g~~Ground water or spring water; Foundation or footing drains where flows are not contaminated with process materials; Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from cooling towers (e.g., "piped cooling tower blowdown or drains); and Vehicle wash-waters where ~~uncontaminated water without~~ detergents or solvents are not~~is~~ utilized.

j. Dust Generation and Vehicle Tracking of Industrial Materials

Minimize generation of dust and off-site tracking of raw, final, or waste materials.

5. Annual Review

At least once every 12 months, ~~submit~~ prepare an Annual Report to ~~the Industrial NPDES Permit Section~~ which includes the following: the results or a summary of the past year's routine facility inspection documentation

and quarterly visual assessment documentation; information copied or summarized from the corrective action documentation required (if applicable). If corrective action is not yet completed at the time of preparation~~submission~~ of this Annual Report, describe the status of any outstanding corrective action(s); and any incidents of noncompliance observed or, if there is no noncompliance, a certification signed by a responsible corporate officer, general partner or the proprietor, executive officer or ranking elected official, stating the facility is in compliance with this permit.

6. Corrective Actions – Conditions Requiring Review

   a. If any of the following conditions occur, review the SWPPP to determine if and where revisions may need to be made to eliminate the condition and prevent its reoccurrence:

      i. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by this NPDES permit) occurs at the facility;
      ii. Control measures are not stringent enough for the discharge to meet applicable water quality standards;
      iii. A required control measure was never installed, was installed incorrectly, or is not being properly operated or maintained;
      iv. Visual assessments indicate obvious signs of storm water pollution (e.g., color, odor, floating solids, settled solids, suspended solids, foam); or

   b. If construction or a change in design, operation, or maintenance at the facility significantly changes the nature of pollutants discharged in storm water from the facility, or significantly increases the quantity of pollutants discharge the permittee must review and revise the selection, design, installation, and implementation of the control measures to determine if modifications are necessary to meet the effluent limits in this permit.

7. Corrective Action Deadlines

If additional changes are necessary, a new or modified control must be installed and made operational, or a repair completed, before the next storm event if possible, otherwise as soon as is reasonably practicable given the scope of the correction action. The reasons for any schedule for a corrective action requiring more than 90 days to complete shall be documented ~~and within 14 calendar days from the time of discovery. If it is infeasible to complete the installation or repair within 14 calendar days, the reason(s) must be documented. A schedule for completing the work must also be identified, which must be done as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery.~~

Where corrective actions result in changes to any of the controls or procedures documented in the SWPPP, the SWPPP must be modified accordingly within 30~~14~~ calendar days of completing corrective action work.

These time intervals are not grace periods, but are schedules considered reasonable for documenting the findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

The existence of any of the conditions listed in Part I.D.6 must be documented within 24 hours of becoming aware of such condition. The following information must be included in the documentation:

a. Identification and description of the condition triggering the need for corrective action review. For any spills or leaks, include the following information: a description of the incident including material, date/time, amount, location, and reason for spill, and any leaks, spills or other releases that resulted in discharges of pollutants to waters of U.S., through storm water or otherwise;

b. Date the condition was identified; and

c. A discussion of whether the triggering condition requires corrective action. For any spills or leaks, include response actions, the date/time clean-up completed, notifications made, and staff involved. Also include any measures taken to prevent the reoccurrence of such releases.

Document the corrective actions taken that occurred as a result of the conditions listed in Part I.D.6. within 30~~14~~ days from the time of discovery of any of those conditions. Provide the dates when each corrective action was initiated and completed (or is expected to be completed). If applicable, document why it is infeasible to complete necessary installations or repairs within the 30~~14~~-day timeframe and document the schedule for installing the controls and making them operational as soon as practicable after the 30~~14~~-day timeframe.

9. Inspections

a. Routine Facility Inspections

During normal facility operating hours conduct inspections of areas of the facility covered by the requirements in this permit, including the following:

i. Areas where industrial materials or activities are exposed to storm water;
ii. Areas identified in the SWPPP and those that are potential pollutant sources;
iii. Areas where spills and leaks have occurred in the past 3 years.
iv. Discharge points; and
v. Control measures used to comply with the effluent limits contained in this permit.

Inspections must be conducted at least quarterly (i.e., once each calendar quarter), or in some instances more frequently (e.g., monthly), as appropriate. Increased frequency may be appropriate for some types of equipment, processes and storm water control measures, or areas of the facility with significant activities and materials exposed to storm water. At least one of the routine inspections must be conducted during a period when a storm water discharge is occurring.

Inspections must be performed by qualified personnel with at least one member of the storm water pollution prevention team participating. Inspectors must consider the results of visual and analytical monitoring (if any) for the past year when planning and conducting inspections.

During the inspection examine or look out for the following:

vi. Industrial materials, residue or trash that may have or could come into contact with storm water;
vii. Leaks or spills from industrial equipment, drums, tanks and other containers;
viii. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
ix. Tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
x. Control measures needing replacement, maintenance or repair.

During an inspection occurring during a storm water discharge, control measures implemented to comply with effluent limits must be observed to ensure they are functioning correctly. Discharge outfalls must also be observed during this inspection. If such discharge locations are inaccessible, nearby downstream locations must be inspected.

~~As part of conducting the routine facility inspections at least quarterly, address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions.~~
~~Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts.~~

~~Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or storm water runoff.~~

b. Routine Facility Inspection Documentation

The findings of facility inspections must be documented and the report maintained with the SWPPP. Findings must be summarized in the annual report. Document all findings, including but not limited to, the following information:

i. The inspection date and time;
ii. The name(s) and signature(s) of the inspector(s);
iii. Weather information;
iv. All observations relating to the implementation of control measures at the facility, including:
    (1) A description of any discharges occurring at the time of the inspection;
    (2) Any previously unidentified discharges and/or pollutants from the site;
    (3) Any evidence of, or the potential for, pollutants entering the drainage system;
    (4) Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water;
    (5) Any control measures needing maintenance, repairs, or replacement;
v. Any additional control measures needed to comply with the permit requirements; and
vi. Any incidents of noncompliance observed.

Any corrective action required as a result of a routine facility inspection must be performed consistent with Part I.D.6. of this permit.

If the discharge was visual assessed, as required in Part I.D.9.c., during the facility inspection, include the results of the assessment with the report required in Part I.D.9.a., as long as all components of both types of inspections are included in the report.

c. Quarterly Visual Assessment Procedures

Once each quarter for the entire permit term, collect a storm water sample from each outfall and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the storm water discharge. Guidance on monitoring is available at:

http://water.epa.gov/polwaste/npdes/storm water/EPA-Multi-Sector- General-Permit-MSGP.cfm

The visual assessment must be made:

i. Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
ii. On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and document why it

was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and

iii. For storm events, on discharges that occur at least 72 hours (3 days) from the previous discharge. The 72-hour (3-day) storm interval does not apply if you document that less than a 72-hour (3-day) interval is representative for local storm events during the sampling period.

Visually inspect or observe the sample for the following water quality characteristics:

iv. Color;
v. Odor;
vi. Clarity (diminished);
vii. Floating solids;
viii. Settled solids;
ix. Suspended solids;
x. Foam;
xi. Oil sheen; and
xii. Other obvious indicators of storm water pollution.

Whenever the visual assessment shows obvious signs of storm water pollution, initiate the corrective action procedures in Part I.D.6.

d. Quarterly Visual Assessment Documentation

Results of visual assessments must be documented and the documentation maintained onsite with the SWPPP. Documentation of the visual assessment must include, but is not be limited to:

i. Sample location(s);
ii. Sample collection date and time, and visual assessment date and time for each sample;
iii. Personnel collecting the sample and performing visual assessment, and their signatures;
iv. Nature of the discharge (i.e., runoff or snowmelt);
v. Results of observations of the storm water discharge;
vi. Probable sources of any observed storm water contamination; and
vii. If applicable, why it was not possible to take samples within the first 30 minutes.

Any corrective action required as a result of a quarterly visual assessment must be performed consistent with Part I.D.6. of this permit.

e. Exceptions to Quarterly Visual Assessments

i. Adverse Weather Conditions: When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying storm event.

Documentation of the rationale for no visual assessment for the quarter must be included with the SWPPP records. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as extended frozen conditions.

ii. Snow: In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, taking into account the exception described above for climates with irregular storm water runoff.

iii. For outfalls that discharge non-contact cooling water and/or process water where the dry weather discharge flow is substantially greater than typical storm water contributions to the overall discharge flow, quarterly visual assessments are not required.

## E. STORM WATER POLLUTION PREVENTION PLAN

To the extent other facility contingency plans prepared outside the scope of the NPDES permit (e.g., SPCC, RCRA) address either directly or indirectly storm water pollution prevention measures, those plans are incorporated by reference and may be cited by the permittee as means to comply with the provisions of this section.

### 1. Development of Plan

Within 18~~12~~ months from the effective date of this permit, the permittee is required to revise and update the current Storm Water Pollution Prevention Plan (SWPPP) to ensure the SWPPP is appropriate for the permitted facility. The SWPPP does not contain effluent limitations. The SWPPP is intended to document the selection, design, and installation of control measures. As distinct from the SWPPP, the additional documentation requirements are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.

i. Contents

The plan shall include, at a minimum, the following items:

a. Pollution Prevention Team – The SWPPP must identify the staff members (by name or title) that comprise the facility's storm water pollution prevention team as well as their individual responsibilities. The storm water pollution prevention team is responsible for overseeing development of the SWPPP, any later modifications to it, and for compliance with permit Parts I.D. and I.E. of this permit. Each member of the storm water pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit,

the most updated copy of the SWPPP, other relevant documents or information that must be kept with the SWPPP.

b. Site Description – As a minimum, the plan shall contain the following:

i. *Activities at the Facility.* Provide a description of the nature of the industrial activities at the facility.

ii. *General location map.* Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) with enough detail to identify the location of the facility and all receiving waters for the storm water discharges.

iii. *Site map.* Provide a map showing:

(A) Boundaries of the property and the size of the property in acres;
(B) Location and extent of significant structures and impervious surfaces;
(C) Directions of storm water flow (use arrows);
(D) Locations of all storm water control measures;
(E) Locations of all receiving waters, including wetlands, in the immediate vicinity of the facility. Indicate which waterbodies are listed as impaired and which are identified by the State of Indiana or EPA as Tier 2 or Tier 2.5 waters;
(F) Locations of all storm water conveyances including ditches, pipes, and swales;
(G) Locations of potential pollutant sources identified;
(H) Locations where significant spills or leaks identified have occurred;
(I) Locations of all storm water monitoring points;
(J) Locations of storm water inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2), indicating if you are treating one or more outfalls as "substantially identical", and an approximate outline of the areas draining to each outfall;
(K) If applicable, municipal separate storm sewer systems and where the storm water discharges to them;
(L) Areas of federally-listed critical habitat for endangered or threatened species, if applicable.
(M) Locations of the following activities where such activities are exposed to precipitation:
  (a) fueling stations;
  (b) vehicle and equipment maintenance and/or cleaning areas;
  (c) loading/unloading areas;
  (d) locations used for the treatment, storage, or disposal of wastes;

(e) liquid storage tanks;
(f) processing and storage areas;
(g) immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by- products used or created by the facility;
(h) transfer areas for substances in bulk;
and ~~machinery~~
(i) locations and sources of run-on to the site from adjacent property that contains significant quantities of pollutants.

(N) Identify in the SWPPP where any of the following activities are exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants in storm water.

c. Potential Pollutant Sources:

The SWPPP must document areas at the facility where industrial materials or activities are exposed to storm water or from which allowable non-storm water discharges may be released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. *Material handling activities* include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For structures located in areas of industrial activity, be aware that the structures themselves are potential sources of pollutants. This could occur, for example, when metals such as aluminum or copper are leached from the structures as a result of acid rain.

For each area identified, the description must include:

i. *Activities in the Area.* A list of the industrial activities exposed to storm water (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).

ii. *Pollutants.* A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity, which could be exposed to rainfall or snowmelt and could be discharged from the facility. The pollutant list must include all significant materials that have been handled, treated,

stored, or disposed, and that have been exposed to storm water in the three years prior to the date the SWPPP is prepared or amended.

iii. *Spills and Leaks.* The SWPPP must document where potential spills and leaks could occur that could contribute pollutants to storm water discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. The SWPPP must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance, in the three years prior to the date the SWPPP is prepared or amended.

iv. *Non-Storm water Discharges* – The SWPPP must document that you have evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non- storm water discharges have either been eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include:

A written non-storm water assessment, including the following:

(1) The date of the evaluation;
(2) A description of the evaluation criteria used;
(3) A list of the outfalls or onsite drainage points that were directly observed during the evaluation; and
(4) The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), or documentation that a separate NPDES permit was obtained. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge.

v. Salt Storage - The location of any storage piles containing salt used for deicing or other commercial or industrial purposes must be documented in the SWPPP.

vi. Sampling Data - All storm water discharge sampling data collected at the facility during the previous permit term must be summarized in the SWPPP.

vii. Description of Control Measures to Meet Technology-Based Effluent Limits - The location and type of control measures you have specifically chosen and/or designed to comply with Permit Part I.D. must be documented in the SWPPP. Regarding the control measures, the following must be documented as appropriate:

(a) How the selection and design considerations of control measures were addressed.
(b) How the control measures address the pollutant sources identified.

d. Schedules and Procedures

The following must be documented in the SWPPP:

i. Good Housekeeping – Any schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers;

ii. Maintenance – Preventative maintenance procedures, including regular inspections, testing, maintenance and repair of all control measures to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line. The SWPPP shall include the schedule or frequency for maintaining all control measures used to comply with the storm water requirements.

iii. Spill Prevention and Response Procedures – Procedures for preventing and responding to spills and leaks, including notification procedures. For preventing spills, include in the SWPPP the control measures for material handling and storage, and the procedures for preventing spills that can contaminate storm water. Also specify cleanup equipment, procedures and spill logs, as appropriate, in the event of spills. You may reference the existence of other plans for Spill Prevention Control and Countermeasure (SPCC) developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review;

iv. Erosion and Sediment Control – If you use polymers and/or other chemical treatments as part of the controls, identify the polymers and/or chemicals used and the purpose; and

v. Employee Training – The elements of the employee training plan shall include all, but not be limited to, the requirements set forth in Permit Part.I.D., and also the following:
(1) The content of the training;
(2) The frequency/schedule of training for employees within each department with responsibility for environmental managemnent~~who have duties in areas of industrial activities subject to this permit~~;
(3) A log of the dates on which designated ~~specific~~ employees received training.

e. Pertaining to Inspections

Document in the SWPPP the procedures for performing, as appropriate, the types of inspections specified by this permit, including:

i. Routine facility inspections and;
ii. Quarterly visual assessment of storm water discharges. For each

type of inspection performed, the SWPPP must identify:

iii. Person(s) or positions of person(s) responsible for inspection;
iv. Schedules for conducting inspections, including tentative schedule for irregular storm water runoff discharges; and
v. Specific items to be covered by the inspection, including schedules for specific outfalls.

f. Pertaining to Monitoring

~~Document in the SWPPP the procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to the facility, including Benchmark monitoring;~~

For each type of monitoring, the SWPPP must document:

i. Locations where samples are collected, including any determination that two or more outfalls are substantially identical;
ii. Parameters for sampling and the frequency of sampling for each parameter;
iii. Schedules for monitoring at the facility, including schedule for alternate monitoring periods for climates with irregular storm water runoff;
iv. Any numeric control values (effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and
v. Procedures (e.g., responsible staff, logistics, laboratory to be used) for gathering storm event data.

g. General Requirements – The SWPPP must meet the following general requirements:

i. The SWPPP shall be prepared in accordance with good engineering practices and to industry standards. The SWPPP may be developed by either a person on the staff or a third party, and it shall be certified in accordance with the signature requirements, under Part II.C.6.
ii. Retain a complete copy of the current SWPPP required by this permit at the facility in any accessible format. A complete SWPPP includes any documents incorporated by reference and all documentation supporting parts I.D. and I.E. of this permit, as well as the signed and dated certification page. Regardless of the format, the SWPPP must be immediately available to facility employees, EPA, a state or tribe, the operator of an MS4 receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection. The current SWPPP or certain information from the current SWPPP must also be made available to the public (except any confidential business information (CBI) or restricted information, but clearly identify those portions of the SWPPP that are being withheld from public access.

iii. Where the SWPPP refers to procedures in other facility documents, such as a Spill Prevention, Control and Countermeasure (SPCC) Plan or an Environmental Management System (EMS), copies of the relevant portions of those documents must be kept with the SWPPP.

## Attachment C

## IDEM Response to Comments

1. **IH West Discharge Flows – Outfalls 009, 010 and 011 Fact Sheet (pages 6, 7, 8)**

The flows for Outfalls 009, 010, and 011 to 52.5 MGD, 47.4 MGD, and 22.1 MGD, respectively. In addition, the Waste Load Allocation (WLA) report and respective mass based WQBELs were recalculated with the adjusted flows.

2. **Outfalls 701 and 701 – Compliance Determinations with Monthly Average Effluent Limits NPDES Permit (pages 18, 19), Fact Sheet (pages 9, 16, 21, 22, 23)**

IDEM commends ArcelorMittal for installing treatment systems in the spirit of going above and beyond the minimum national standards. However, the development document citation footnoted above allows openness for the design of treatment technologies to "achieve the limitations and standards" for the corresponding wastestreams. Therefore, the system installed by the facility should meet the applicable limitations and standards, including daily maximum and monthly average limitations.

In addition, the definition identified above from 40 CFR 122.2 implies that the use of zeros on days of no discharge is not an acceptable method of calculating the monthly average value. As noted above, the monthly average is "*...calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month."* In this definition, the use of the word "measured" appears to negate the assumption that alternate values can or should be used.

No changes are necessary at this time.

3. **Storm Water NPDES Permit (pages 26 to 44), Fact Sheet (pages 29 to 31)**

In response to the above comment, most of the suggested changes have been made. The first additional paragraph in Part I.D was not added, but was included as suggested in Part I.E. Also, the second paragraph in Part I.D.4.i. was not added. The permittee is required to document when the listed allowable non-storm water discharges occur.

4. **IH West Section 301(g) Variance Request for Ammonia-N and Total Phenols NPDES Permit (pages 6, 11, 15), Fact Sheet (pages 41, 42)**

Given the scope of this request, IDEM believes this request will be more adequately addressed in a separate permit modification. At such a time, the permittee will need to submit a complete NPDES application package, as well resubmit all the relevant documentation pertaining to the 301(g) variance request included and updated variance application. This action, it should be noted, may include U.S. EPA input.

5. **Outfall 509 – Monitoring Frequencies**
**NPDES Permit (page 10), Fact Sheet (page 35)**

A review of the compliance history indicates that the monitoring frequency for Internal Outfall 509 may be reduced to 1 X Weekly. The final NPDES permit has been changed to reflect this frequency.

6. **Section 316(b) Cooling Water Intake Structures**
**NPDES Permit (pages 69, 70), Fact Sheet (pages 37 to 40)**

In accordance with 40 CFR 125.95(a)(1), "the operator of a facility subject to this subpart whose currently effective permit expires after July 14, 2018, must submit to the Director the information required in the applicable provisions of 40 CFR 122.21(r) when applying for a subsequent permit". The facility's current permit has an expiration date of November 30, 2016. In accordance with 327 IAC 5-2-6(b), the permit is administratively extended until the renewal permit is issued. However, this does not negate the expiration date identified in regards to compliance with 40 CFR 125.95. The above comment requests that the information be submitted with the next renewal application. IDEM was provided an alternate schedule for submitting the materials from the permittee on June 27, 2017. After review of this information, Part IV.B.6 has been changed to read:

> "Submit the information required to be considered by the Director per 40 CFR 125.98 to assist IDEM with the fact sheet or statement of basis for entrainment BTA, as soon as practicable, but no later than *the next permit renewal application*. ~~July 14, 2018.~~"

7. **Streamlined Mercury Variances – Outfalls 002, 009, 011 NPDES Permit (pages 3, 15, 71, 72), Fact Sheet (page 41)**

Based on a review of the data during the SMV application review, Outfalls 002 and 011 do not qualify for a SMV. This does not prevent the permittee from reapplying at any later date. Futhermore, the data for Outfall 002 was reevaluated and determined that there is no RPE for mercury. Therefore, the effluent limits for mercury have been replaced with reporting requirements at Outfall 002.

In addition, the SMV granted for Outfall 009 as part of the original SMV application became effective September 1, 2016, and will remain in this NPDES permit. The SMV is due for renewal with the next NPDES Permit renewal application. The data will be re-evaluated at that time.

8. **Outfalls 002, 009, 010, 011 – Footnote [2] Water Treatment Additives NPDES Permit (pages 3, 4, 6, 7, 11, 12, 15, 16)**

The above referenced footnotes have been changed to read:

> In the event that changes are to be made in the use of water treatment additives ~~including dosage rates beyond the previously approved estimated~~

~~maximum dosage rates, or changes~~ that could significantly change the nature of, or increase the discharge concentration of the additive to Outfall 002, the permittee shall notify the Indiana Department of Environmental Management as required in Part II.C.1 of this permit. The use of any new or changed water treatment additives, or *increased* dosage rates shall not cause the discharge from any permitted outfall to exhibit chronic or acute toxicity. Acute and chronic aquatic toxicity information must be provided with any notification regarding any new or changed water treatment additives or dosage rates.

9. **Outfalls 002, 009, 010, 011 – Footnotes Regarding LOD/LOQ Reporting**

The above requested change is not incorporated into the final permit. In accordance with 327 IAC 5-2-11.6(h)(3)(C), a value of zero is not appropriate to assign daily values when calculating compliance with the daily maximum mass limitation.

10. **Thermal Effluent Requirements**
**NPDES Permit (page 67), Fact Sheet (pages 22 to 26)**

The above requested change has been made. Footnotes [1] and [2] in Part III.A have been combined and adjusted to read:

[1] Temperature at Outfalls 002, 009, 010, and 011 shall be sampled. On days when temperature is sampled at the outfall, temperature shall also be sampled at the intake supplying the most significant source of water to the outfall. As an alternative to direct grab measurements during this time period the facility may install a more permanent temperature measuring device that will retain the highest temperature value during any given 24 hour period.

11. **Part I.C.2.f – DMR Due Date NPDES Permit (page 22)**

The above requested change has been made.

12. **Part I.C.5.c – Reporting Times of Analyses NPDES Permit (page 25)**

This is a condition of all similarly issued NPDES permits. No changes are made in response to this comment.

13. **Part I.C.6 – Reporting Additional Data NPDES Permit (pages 25, 26)**

This is a condition of all similarly issued NPDES permits. No changes are made in response to this comment. If the permittee has NetDMR or MMR questions, please contact IDEM's Office of Water Quality Compliance and Data Section.

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE NO: 2017 – 7B – F
DATE OF NOTICE: JULY 21, 2017

**The Office of Water Quality issues the following NPDES FINAL PERMIT.**

## MAJOR – RENEWAL

**ARCELORMITTAL IN HARBOR WEST FACILITY,** Permit No. IN0000205, LAKE COUNTY, 3001 Dickey Rd, East Chicago, IN. This major industrial facility discharges 104 million gallons daily of storm water, process & non-process wastewater into IN Harbor Ship Canal. The Streamlined Mercury Variance application (public noticed 6/16/16) was submitted & incorporated into this permit. Permit Manager: Richard Hamblin, 317/232-8696, Rhamblin@idem.in.gov.

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## Notice of Right to Administrative Review [Permits]

If you wish to challenge this Permit, you must file a Petition for Administrative Review with the Office of Environmental Adjudication (OEA), and serve a copy of the Petition upon IDEM. The requirements for filing a Petition for Administrative Review are found in IC 4-21.5-3-7, IC 13-15-6-1 and 315 IAC 1-3-2. A summary of the requirements of these laws is provided below.

A Petition for Administrative Review must be filed with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the issuance of this notice (eighteen (18) days if you received this notice by U.S. Mail), and a copy must be served upon IDEM. Addresses are:

Director
Office of Environmental Adjudication
Indiana Government Center North
100 North Senate Avenue - Room N103
Indianapolis, Indiana 46204

Commissioner
Indiana Department of Environmental Management
Indiana Government Center North
100 North Senate Avenue - Room 1301
Indianapolis, Indiana 46204

The Petition must contain the following information:

1. The name, address and telephone number of each petitioner.
2. A description of each petitioner's interest in the Permit.
3. A statement of facts demonstrating that each petitioner is:
    a. a person to whom the order is directed;
    b. aggrieved or adversely affected by the Permit; or
    c. entitled to administrative review under any law.
4. The reasons for the request for administrative review.
5. The particular legal issues proposed for review.
6. The alleged environmental concerns or technical deficiencies of the Permit.
7. The Permit terms and conditions that the petitioner believes would be appropriate and would comply with the law.
8. The identity of any persons represented by the petitioner.
9. The identity of the person against whom administrative review is sought.
10. A copy of the Permit that is the basis of the petition.
11. A statement identifying petitioner's attorney or other representative, if any.

Failure to meet the requirements of the law with respect to a Petition for Administrative Review may result in a waiver of your right to seek administrative review of the Permit. Examples are:

1. Failure to file a Petition by the applicable deadline;
2. Failure to serve a copy of the Petition upon IDEM when it is filed; or
3. Failure to include the information required by law.

If you seek to have a Permit stayed during the Administrative Review, you may need to file a Petition for a Stay of Effectiveness. The specific requirements for such a Petition can be found in 315 IAC 1-3-2 and 315 IAC 1-3-2.1.
Pursuant to IC 4-21.5-3-17, OEA will provide all parties with Notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action. If you are entitled to Notice under IC 4-21.5-3-5(b) and would like to obtain notices of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action without intervening in the proceeding you must submit a written request to OEA at the address above.
If you have procedural or scheduling questions regarding your Petition for Administrative Review you may contact the Office of Environmental Adjudication at (317) 233-0850 or see OEA's website at http://www.in.gov/oea.